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The JOURNAL *of* Real Estate Management

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VOLUME III NUMBER 3

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The JOURNAL *of* Real Estate Management

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THE JOURNAL OF REAL ESTATE MANAGEMENT

22 West Monroe Street, Chicago, Illinois

EDITORIAL

WILL THE BOOM GO "BOOM"?

AS this issue of the JOURNAL goes to press, businessmen the nation over are suffering from the creeping paralysis of fear so indelibly written on the minds of everyone who remembers the year 1932.

Notwithstanding the prevalent "jitters," owners of the nation's real estate can thank their lucky stars that the debt on the country's buildings has been largely liquidated—that the rental markets of our cities and towns will not suffer the ravages of "receiver" operation. Real estate today is pretty generally strongly held—is back in the hands of efficient property managers.

To those managers, this editorial thought is proffered: if the boom really goes "boom," let's not have a repetition of the devastating and unconscionable price-cutting, concession-giving, throat-cutting tactics employed by the novices who managed buildings in 1929-33. It's up to us to prove that there is a real science in property management.

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The **JOURNAL** *of*
Real Estate Management

Volume III **November, 1937** **Number 3**

Hidden Costs of Poor Management

By A. F. MOHL

WHEN the subject of this discussion was suggested to me, I was very puzzled. It has been my job for some years to rectify the ailments of properties that have been writhing in the agonies caused by poor management, and, to me, the costs of poor management have been so obvious that I have never considered that any of them might be classed as "hidden."

The obvious costs of poor management are familiar to every one of us. They are evident in utterly neglected buildings, in exorbitant charges, and in poorly judged rental prices that either fill apartments at too low rentals or keep them empty at prices above the market. These costs of poor management can be seen with the naked eye, but my purpose here is to hold up the microscope to show the less apparent costs resulting when modern scientific management is not applied to a property.

Your job and my job as property managers is to act sincerely in the interests of the owner. We must give him the greatest possible return on his investment, and, at the same time, we must preserve his investment in the property to the fullest extent possible. To fall short of this goal is to betray our capacity of trust.

Every day we spend money for our owners. We order work by telephone and pay for it by check. If we become careless and forget that we are spending actual dollars and cents or if we fail to buy as though those dollars and cents were coming out of our own pockets, we are failing in our jobs, and, without doubt, we are piling up hidden costs for our principals.

CONTROLLING UTILITY CHARGES

Let us see what can be done in controlling the charges for the utilities—gas, electricity, water, and telephone—ordinarily considered to be fixed expenses. Rates for these services are fixed by the franchise holders under the supervision and control of public utility or commerce commissions. No amount of pressure or cajolery will change these unit rates, but what about the units consumed?

The alert manager can be counted on to immediately check the cause for any extraordinary increase in his light bill. He will make periodic inspections to check extra wattage in the tenants' apartments. Where the building pays the tariff, oversize lamps and an aggregation of heating appliances run up bills that call for an increase in the tenant rate.

Did you ever stop to think that the use of fifteen-watt lamps in hallways in place of twenty-five-watt lamps will cut hall lighting costs by one-third? The smart manager watches his wattage. By the same token, the management firm that watches the pennies does not buy lamps on the strength of the greatest discount to be obtained. Our research has proved

that cheap lamps not only have a shorter life than standard makes but, what is more important, consume more current. The current used is a greater item of cost than the lamp.

If the building pays for the gas, the management should send the engineer on periodical inspections to readjust any stoves which are burning improperly and wasting gas. That inspection tour should also give ample attention to faucets and flush valves. One building, turned over to us after a period of mismanagement, was able to cut its water bill 44 per cent through just such an inspection tour.

The cost of telephone service is a bugaboo to the manager of every building with switchboard service. The answer is: alert operators and a monthly audit to compare the total calls charged by "Mr. Bell" with the calls charged to tenants and the house. Through these methods, the manager in one of our buildings has put his telephone department upon a self-supporting basis. Sloppy management does not have to pay any attention to these utility wastes; the owner will not see them in his monthly statement and cannot recognize them as hidden costs.

VARIATION IN BIDS

It has always been a great mystery to me, and I still am at a loss to understand, how a property manager can bring in bids for a contract job ranging from, let us say, $500 to $800. To me it is obvious that somebody is wrong when one contractor bids 60 per cent more for a job than another. Such bids must indicate that either the wrong contractors were invited to submit proposals or the management failed to provide complete and explicit specifications.

When widely varied bids are submitted, I am at a loss to know how to proceed. I am afraid to let the $500 man have the job, lest poor workmanship or materials will result in later repair and maintenance costs or inadequate equipment will make the entire expenditure in vain. Yet, having taken these bids, I cannot justify giving the job to the high bidder and conceivably allowing him an unfair profit.

Let us consider the case of a hotel in which just such a situation arose. A new cocktail lounge was being planned, and, to make it thoroughly modern, the manager proposed the installation of air conditioning equipment. Most managers do not claim to be air conditioning engineers, but this one proceeded to obtain proposals from three leading manufacturers. The bids, beautifully bound and handsomely illustrated, were really impressive works of art. The owner had every right to believe that these bids, presented by leaders in their field, were intelligently and accurately prepared.

What happened? The low bid, with the protection of fine-sounding, wordy guarantees, got the job. The machine operated beautifully and everything seemed satisfactory until a spell of hot weather hit the town. The manager had advertised—"Keep cool—70 degrees in our cocktail lounge." But he could not keep his promise; his machine did not have adequate capacity to carry the load, and the system failed to do its job. The owner tried to enforce his guarantee; but, after much waste of time and the loss of many patrons, he had to increase the capacity of the machine at his own expense. When he was all through, the cost of the installation ran much more than the amount of the high bid in the first instance.

The owner of that hotel wasted money because he had poor advice from his manager. He made a good buy at a good price and obtained good merchandise; but it did not fill his needs. He was penalized with a hidden cost; instead of buying sound advice from an expert, he accepted poor advice from an unqualified source.

PURCHASING POWER

Even a small property management organization has purchasing power of appreciable strength if it is properly organized. To wield such power with the great-

est success, the property manager must determine in advance what the needs of all of his properties will be over a period of a year. He is then in a position to barter with dealers and merchants who will give lower prices to a volume buyer.

Some months ago we entered into a contract covering our carpet requirements for a year for a group of furnished apartment buildings. By studying the market, we were able to place this future order before a price advancement and at a time when lining prices had been reduced. We saved thousands of dollars through this deal because, *first*, the size of the order obtained for us an unusually attractive offer and, *second*, the prices of carpeting have continued upward at an amazing pace since placing the order.

Owners who might have participated in that contract but failed to do so are paying 25 per cent more for the same merchandise. Despite intelligent and frugal buying as individuals, these owners are paying a hidden cost because they overlooked the power of collective buying.

Labor Control

Poor management usually falls down on labor control. Before I proceed, let me say that I do not intend to get into a discussion of the labor problem. However, wages take a large slice of the rent dollar and must be carefully controlled if maximum efficiency is to be gained.

Let us assume that competent help is hired at fair wage rates. Starting from this point, competent management will control the human element, while poor management will fail in this respect. The production of a painter on the assembly line of an automobile plant can be fairly accurately controlled, and the cost of his work is computed to a fraction of a cent. This is possible because each fender comes to him in exactly the same condition, and his hourly production is exactly standardized. Unfortunately for the building owner, no such yardstick is available for calculating the decorator's output in an apartment.

Preparatory work is a costly yet vitally important part of decorating. The amount necessary will vary widely with every apartment. Wall openings and treatment, to say nothing of tenant abuse, are anything but constant. The good manager will know with a degree of accuracy how much time should be spent on the apartment; the poor manager will not be able to tell whether his men are giving value for value or stalling a good portion of the precious six-hour day allowed by the union.

An electric eye can count fenders and check up on inefficient help in the automobile plant, but there must be brains behind the eye of the manager who is qualified to check on the output of his painters. Experience shows that true economy often dictates the employment of $8.00 a day men rather than less efficient men at $5.00, yet far too many managers will keep $5.00 a day men and discharge the higher priced workman.

Since labor costs constitute probably 40 per cent of the operating expenses of an elevator-type building, it is strange that more management firms do not augment their purchasing department staff with a director of labor. I am certain that the average resident manager does not devote anywhere near 40 per cent of his spending efforts to labor costs and means of reducing them. Poor management neglects to give sufficient attention to the man in management.

In poor management it is often true that the agencies consider their job that of renting and collecting only, a point which I shall discuss later at greater length. However, at this time I mention it to show that good management also requires a well-developed working knowledge of the mechanical make-up of the property. The lack of this training results in high hidden costs because such costs remain unknown to every person in control. The old saw, "Knowledge is power," is startlingly true in this connection.

As an example, I have in mind a building containing a theatre and some stores and offices equipped with two heating plants—one for the theatre and the other for the balance of the building. An investigation at a time when a change in management was made revealed a cross-connection of the water heating equipment, whereby the theatre tenant gained a distinct advantage and saved a substantial amount of fuel.

During further investigations it developed that originally the entire building was heated by the owner, and, when the separation of the heating systems was made, no one paid any attention to the hot water connections. This hidden fuel cost had been concealed for years until a new and efficient management came on the job with a mechanical knowledge and sufficient curiosity to unearth the hidden drain on the coal pile.

Here was a specific engineering problem requiring the services of a heating specialist, but it was discovered by a manager with an elementary knowledge of a wide scope of mechanical subjects. Once discovered, the securing of technical advice from an expert was an easy matter. In short, my point is that in poorly managed buildings maintenance losses remain undiscovered and there is no opportunity for an engineer to correct improper installations or wasteful methods.

INSURANCE COSTS

I have devoted a great deal of time to the study of insurance costs in our office; and, with all due modesty, I can truthfully say that we have been able to save our clients thousands of dollars in premiums. The agent's job is to save his principal's money, and I have no patience with those greedy management agents who overlook the possibility of savings in order to increase their own commissions.

It is recognized, of course, that premium rates are generally fixed by the underwriters, and too often the careless agent will take them at face value. The field of insurance matters is intricate, and careful study is required to determine the exact coverage necessary in a given case. Too little coverage endangers the owner's equity, and too great a coverage reduces his return.

In modern business, insurance has taken its place with the two well-known inevitabilities—death and taxes. The competent manager should be able to soften the blow of the insurance toll, even if he cannot get very far in that respect with taxes.

Among the possibilities for reducing insurance costs is that of plate glass coverage. Many people do not take advantage of the fact that this coverage is available upon a contingent basis. Under such a policy only 50 per cent of the premium is paid at the beginning of the year; the balance of the payment is made only if and when there is a loss. This policy offers a 50 per cent saving if no losses occur, with a liability limited to the amount of the full premium.

In workmen's compensation insurance there is a discount available based upon loss experience. Casualty insurance covering the several properties of one client under one policy can be obtained at a saving of 10 to 25 per cent over the cost under individual policies. Similar savings resulting from combining the coverage of several properties in one policy may also be secured on other types of insurance.

CHEAP VS. QUALITY MERCHANDISE

I preach economy, and I believe in saving pennies, but I do not believe in buying cheap merchandise. The manager who buys quality merchandise at the best price available is the one who comes out on top in the long pull.

I know that I can buy an electric socket for fifteen cents and that I can buy a socket of approved standard make for twenty-three cents. I also know that the latter will last twice as long as the cheaper grade and that a maintenance man will spend one-half hour's time replacing the cheaper one.

Thousands of buildings are painted inside with so-called enamel selling at $1.95 a gallon instead of better grade enamels which cost $3.25 a gallon. The cost of applying either gallon of goods will run at least eight dollars. The cheap job will be repainted next year and the year after, while the better grade of enamel will wash for two years. Thus, over the three-year period, the cheap job will cost $30, while the job with high class merchandise will cost $20 and will save one-third of the decorating costs.

One of the easiest ways to save pennies is through the cash discount offered by many tradesmen. We have an inviolate rule that all bills for ordinary expenditures must be paid within ten days to claim that discount. If such purchases aggregate $5,000 a year for one building, this practice saves that building $100, which is money in anybody's language. Agents who allow bills to accumulate and lose this discount through carelessness or design are taking money out of their client's pocket, just as surely as if they were following the unethical practice of accepting rebates on purchases.

Concealed Costs in Income

As I go along with this discussion I find that each hidden cost assumes a gigantic proportion at the time it receives attention. The costs discussed thus far are all on the expense side of the budget; but, as I think it over, it seems to me that the most insidiously concealed costs are on the income side of the ledger.

From the owner's standpoint, I believe the greatest danger of hidden costs is in the income department. After all, he does get a monthly statement of expenses and a mess of receipted bills, which, to some extent, gives him a chance to compare costs. However, his only check on income is dollars and cents, rent per room, and occupancy. He cannot sense what is happening to the prestige of his property—whether the amount of turnover is normal or excessive and whether or not tenant relations are being handled skillfully.

Here is a simple case in point: a small property was operated by an agent who employed a resident manager to show apartments in return for free rent—not an objectionable practice under the circumstances. This resident manager decided that the apartment over the boiler room was not rentable. The agent and owner both assumed that the resident agent was correct, with the result that for some time the apartment was not productive. A change in ownership brought about a change in management. The new agent decided to rent the apartment, if possible, and succeeded in keeping it occupied for at least 80 per cent of the time—at less than standard rates, however. The services of a resident manager were also regarded as unnecessary. He was, therefore, relieved of his duties and was required to pay rent. This also worked out equally satisfactorily, and, by these two moves, the income of the building was increased 4 per cent.

Poor management is bound to result in increased turnover, which is costly to the owner; it not only results in increased decorating and other expenses, but it is bound to produce lapses in occupancy. Loss of one month's rent in 30 per cent of a building's apartments, due to turnover, will cut occupancy and income by 2½ per cent.

It is an accepted fact that it is cheaper to keep an old tenant than to move him out and move a new one in. Extra decorating costs; requests for new stoves, new bathroom fixtures, new ice cube trays, etc.; investigation of a new credit risk; changes in office records; and possibly a brokerage commission all appear innocent enough in the monthly statement. Normal turnover is inevitable, but when multiplied by two or three through poor management, it becomes a costly luxury, even though concealed, for the property owner.

Tenant Relations

Good management is now paying more

attention to tenant relations than ever before. The value of tenant goodwill is an intangible quality that many shortsighted management agencies are apt to overlook. The clumsy handling of tenant relations takes a heavy toll in losses through lowered occupancies, rates, and increased expense. These are not apparent upon a casual inspection of a building's showing.

To illustrate what I mean by handling tenant relations cleverly, let us suppose that the tenant contact man is approached by Mrs. Swank, who wants her bathroom wall painted violet. The man who says, "I'll have the painters up tomorrow," rates a "goose egg" for his answer. He is extravagant with the boss's money because it will be necessary to cover that wall with two coats of paint next year. The tenant contact man who tells his tenant that she cannot have bathroom walls of violet in terms that send her blood pressure up twenty points gets the same rating as the first.

The diplomatic contact man with the 100 per cent answer tells Mrs. Swank that violet in paint is very unsatisfactory, that it will burn to a nauseating pink within a few months, but that if she will pay for the work, he will be glad to have the walls painted the new shade—Honey Yellow—which is a perfect complement to any violet curtains or fittings she might wish to use. He is not a "yes man"; rather, he says "no" like a gentleman.

In my experience as a tenant, and from the experience of my friends, I have found that many firms create good reputations for themselves, while others, through thoughtless policies, are practically blacklisted among certain circles of apartment dwellers. The firm that can give tenants bad news and make them like it is the firm that will show the greatest profits for its property owners.

THE MERCHANDISING FUNCTION OF MANAGEMENT

Merchandising ability is a quality that must be incorporated in every successful property management organization. Lack of it is an extreme disadvantage and will roll up hidden costs in alarming proportions. Every unit rented—every lease made—constitutes a sale. The consideration involved is a greater amount than that of any other one purchase for the average family, except perhaps its automobile.

Yet, despite the major significance of apartment sales, most people showing apartments are of the "order-taker" type. Poor management usually assembles a low-priced staff. The incompetence that accompanies low pay entails poor salesmanship, with the inevitable consequence that less than 100 per cent of the potential sales value of the merchandise is realized.

I am not a sales executive, and I lay no claim to any ability in that field. However, as a prospective tenant, I readily recognize good and bad sales appeal in apartments, and, like all normal beings, I respond to a good presentation when renting an apartment. Three years ago I rented an apartment at a considerably larger sum than my budget anticipated. Being human, my wife and I justified our action in revising our budget, with the thought that after all our home is the most important item in our budget.

Why did we do this? Only because of first-class merchandising on the part of the rental agent and his staff. That apartment, from one end to the other, had an atmosphere that said as plain as any words could say, "The management of this building is devoted to the tenant's needs." We paid the top neighborhood price for that particular type of accommodation, and the owner profited from his agent's thoughtful merchandising.

Poor management could undoubtedly have rented the apartment, but it would have brought an average price instead of a price above normal for the neighborhood, and the owner would never have known that better prices were attainable.

There is no unit value for measuring the efficacy of salesmanship, as we might

measure the value of bricks. Cold comparisons of the results of one manager's operation against that of another is usually apt to be impractical. Circumstances and conditions vary so widely that results for even identical buildings or similar periods for one building are not necessarily true criterions. However, I recently had the opportunity of observing two buildings, identical in construction and layout and situated next door to each other. They are sufficiently large as to permit the striking of an average, eliminating chance to a great degree. Building "A" is operated by an individual, while Building "B" is operated by a reputable management firm.

"A" has existed on a semi-starvation maintenance program for three years, while "B" has been maintained in an acceptable condition throughout the period. The latter has maintained higher rent schedules than the former, two years ago the average rental being 12 per cent higher than that of "A."

A slightly higher net income was produced by the individual operator during the first two of the past three years, but this year his sins caught up with him. Although he raised his rents to within 3 per cent of the rates obtained by the well-maintained structure, the operating profit on "B" was still 50 per cent greater than that realized by the shortsighted individual. Clever merchandising and smart maintenance paid big dividends for the owner of building "B."

No one in his right mind will contend that a rent collector should be expected to design and conduct a productive advertising or publicity campaign. Real ability is necessary to reach the market effectively. However, the good management agency will have in its organization a diversification of talent that will meet all requirements and emergencies. The lack of such diversification will characterize the poor management staff. The result inevitably will be the failure to secure maximum income.

Timing

Our most important commodity is time. We charge for our space according to periods of time. Therefore, good timing is a more substantial factor in our business than in some others. But watch the poor manager; he will do the right thing too late. Inevitably, he "misses the boat" and the owner loses potential income. He does not sense a changing trend until the change is upon him or behind him. Even if the change is called to his attention, he waits until too late to conform adequately to it.

Alertness to such changes of trend can be achieved only by the manager who keeps adequate records of prospects and watches his sales resistance. A striking example of the benefits to be derived from such observations concerns a property commanding relatively high rental rates. Recently, there was a tendency for people of means to choose other sections of the city in preference to the location of this particular apartment building.

The trend was first noted in the smaller number of inquiries at the building, although occupancy had not yet suffered to any extent. Alarmed by this danger signal, the manager began to study ways and means of combating this trend. He satisfied himself that there were plenty of families in the surrounding territory who could still afford his apartments, provided he could draw their attention to the building. His solution took the form of a startling and spectacular revision and modernization of his lobby, which could be achieved at a relatively low cost. He felt sure that the stir created would result in new interest in his property.

While time has not been sufficient to test the wisdom of this program, it is a fact that he has the jump on his competitors; he was able to sense the need for such a move before an income loss robbed him of the means of financing the improvement.

Goodwill

Goodwill is always shown on the bal-

ance sheet as an intangible asset. To a hotel or apartment building, this matter of prestige is a very real asset, which measures itself in dollars and cents. A hidden loss is created for the owner just as soon as the prestige of his building starts to decline.

A building loses caste most frequently through the admission of undesirable guests or tenants. There is always a possibility that such persons may slip in, but good management will not tolerate them to remain. This undesirability does not necessarily spring from immorality. People who are unduly noisy or are not ordinarily clean will undermine a building's reputation with equal rapidity. Once that prestige is gone, the building is shunned by the more discriminating prospects, leaving vacancies which poor management will fill with more undesirables. Rapid turnover and heavy credit losses are the inevitable companions of this condition.

One of the easiest ways to guard the prestige of the building and at the same time prevent credit losses is to check every applicant through a recognized credit agency. No matter how good a judge of human nature the rental man may be, it is a recognized fact that appearances cannot be trusted. Even a check with a present landlord is not conclusive. Occasionally an unscrupulous landlord is so anxious to get rid of an undesirable that he will recommend an individual in spite of delinquency.

Bad management can be counted upon to pile up credit losses. Even under a change of management, it may take months to cut down delinquencies and get rid of all the bad risks. Even a 2 per cent bad debt loss under mediocre management may not excite suspicion in the mind of the owner. On the other side of the picture, believe it or not, there is the manager who follows a too stringent collection policy. This sounds odd, of course. The relationship between the item of low credit losses and occupancy is never very clearly defined, but in one hotel, whose manager boasted of his low credit losses, the connection was very obvious. The hard-boiled credit policy was adding 1 or 2 per cent to net revenue, but vacancies were costing 5 or 10 per cent. It might be said that he would give credit to railroad and telephone company employees only. When his successor took over the management, his bad debt ratio increased, but occupancy and net income were greatly improved.

DISHONESTY

My father taught me the rule of honesty, and I am teaching the rule of honesty to my son. But never, until I came into the real estate business, did anyone tell me that there were varying degrees of honesty. I am very much afraid that we need a judge in our business to decide just how far we can go and still remain honest.

I am referring to that which in my opinion is one of the most despicable and unsavory practices that has grown up in our business—one through which owners are deprived of their rightful income in a manner that I am afraid many of us consider morally right and legal. That is the practice of accepting rebates or commissions on purchases.

If a salesman gives you a commission or rebate, the selling price of the article is fixed so as to include that commission, and the money still comes out of the owner's pocket. Last week a coal man said to me, "You had better accept the commission of twenty-five cents a ton, because if you don't, somebody else will." They like to misname it a commission.

On another occasion a salesman who was new in our territory called at my office. I told him we were not interested in his product. That night some one telephoned me at home and said that he wanted to stop in and see me on an urgent matter. When he arrived, I recognized him as the salesman of the day's visit. Without much preliminary, he said, "I

didn't want to approach you with this in your office, but how much is it going to cost me to do business with you?" After I had voiced my opinion regarding his tactics, he apologized and said, "I hope you won't have any resentment toward me; I was only following what I thought was the custom in these deals."

If I have a refrigerator delivered to my home free, after signing an order for fifty refrigerators, I am as much of a grafter as any crooked politician; but the practice is dignified under the heading of commissions. When a cashier uses some of the petty cash fund for a few days, we call it embezzlement. Is it *then* legitimate for a management agency to use an owner's funds during the course of the month for the operation of its own business?

We have a rule providing summary dismissal of any employee found to be accepting rebates or commissions, but are we any less culpable if we intermingle our clients' funds with our own? For the sake of those worthy of the management profession, I sincerely hope that The Institute of Real Estate Management, which has been founded on the principle of absolute honesty in management, will become the Judge Landis of its field.

Personnel of the Management Company

Good management implies the employment of *good* men and *intelligent* men. A management firm must have experienced employees if it is to protect its clients from hidden costs. A firm which has been in business for eighty years certainly has a record of stability and integrity, but unless it has kept pace with changing trends and methods, it can make no claim to greatness.

Without the benefit of experience in the proper places, many blunders are apt to be made. For instance, when it became popular for receivers in Chicago to grant leases on small hotels, the usual clauses with respect to maintenance of furnishings were written into the leases. However, these leases also contained the clause, "ordinary wear and tear excepted." Five very innocent words, but what headaches they produced when the leases expired!

This experience taught us to provide for an adequate cash deposit each month to be used for proper repairs and maintenance, so that the so-called rental does not actually include liquidation of the carpet and furniture in the hotel.

Percentage clauses in store leases are, of course, extremely important. Yet, one of our properties is still burdened with an annual loss of income through a depression-born lease to a chain drug store made without a percentage clause by an inexperienced operator.

Recently we secured a prospective tenant for a single-purpose building. Upon making a proposal to the owner, we found that he had previously, in desperation and with the feeling that a satisfactory new tenant could not be obtained, renewed the lease of the incumbent tenant at an extremely low rental. With experience, he would have had the foresight in such a case to have insisted upon the insertion of a sixty-day cancellation clause in such an unsatisfactory lease. Experience lends us foresight with which to avoid such losses.

In Chicago, where there are two great moving days each year, we, as managers, must determine our new rentals about ninety days in advance of these dates. After a dormant winter with very little renting or inquiry, we must, in February, fix our May first rentals. Managers are not fortune tellers, but if we have sound experience with which to interpret economic trends, occupancy, and other pertinent factors, we can determine the strength of the market with sufficient accuracy to price our apartments right. The importance of correct pricing cannot be stressed too greatly; it is one of the greatest aids that scientific management has been able to give the owners.

To price an apartment at one figure and then haggle until a price satisfactory to

tenant and landlord is determined is a sign of weakness; such a procedure is demoralizing to the market and results in an uneven schedule of rents throughout the building. To price apartments too low is to tie them up for a year at prices that fall short of producing the maximum income, while to overshoot the market is to let the better prospects get away before prices can be readjusted. The result is apt to be either vacant apartments or the acceptance of unsatisfactory tenants, which, in either case, means reduced income for the building. These failures are characteristic of receivers and side line managers.

Confession is good for the soul, and we all can gain something from self-analysis. I believe that we do too little self-criticizing. That is especially true in a period of recovery, when the natural trend gives us a better showing each year than we had the year before. We cannot have true economy of operation if we spend more freely just because we have additional income from increased rents.

To do justice to our jobs, we should carefully examine our records at least once a month to see where an extra dollar or two can be squeezed out for the owner. There is not one of us who is not aware of all of the possibilities of saving outlined here, but, if things are looking up, we do not take the trouble to follow through on them.

We all know we should check up on the painter's schedule, but we do not bother to do it. We know that the janitor has been overheating one of the buildings we inspected today, but he was not around so we did not bother to call him in to check up on him.

There is no deep, dark mystery about good operation. It is true that we have reduced certain aspects of our business to a scientific formula and that if we are on our toes, we have instituted means of checking inadequate results; but the fundamentals of good management have not changed.

Most of the failures—the hidden costs—are the result of the failure of the manager to follow through. The good manager recognizes his mistakes and corrects his faults. The poor manager may not know he is making a mistake, but, even if he does, he is not sufficiently cognizant of his duty to his boss—the owner—to bother with correcting it. In short, the good operator knows his job requires hard work and applies himself to it; the poor manager is either stupid or lazy.

* * *

Purchasing Supplies

By KENNETH W. MOORE

MANY purchasing agents fail to realize the importance of intelligently buying the items classified as "Maintenance Supplies" and are unaware of the waste of materials and money that accompanies careless buying habits.

In order to effect an economy of management, it is always desirable, even necessary, to have a sound knowledge of all items purchased for maintenance work and upkeep. Correct, efficient buying practices will keep a building or buildings in the best possible physical condition for the least amount of money.

The buyer of maintenance supplies occupies a very important position. He must at all times be able to advise the person supplying the financial resources just what was obtained for the money spent or why it was spent. He must be able to see beyond trade names and high-sounding descriptions and find the true worth of the commodity involved. This is very important because many times unreasonable and unnecessary prices are asked for highly advertised products made of materials of no better quality than that found in similar lower-priced products not so extensively advertised. Many salesmen frequently make extravagant claims for their products and what they will accomplish. If the buyer knows his subjects, he will at once know that some of these claims cannot possibly be correct and, therefore, can judge their worth accordingly.

PAINT AND VARNISH

Paint and varnish products are without a doubt one of the most important of all maintenance supplies. Too much cannot be said about this subject. Intelligent buying practices will result in lower maintenance costs at all times.

Many thousands of dollars have been spent to restore property or rehabilitate the interior or exterior of buildings because cheap paint or the wrong type of paint was used. This money could have been saved for the owner if intelligence had been exercised in the proper buying of paint throughout the history of the property involved.

Some purchasing agents judge the quality and price of paint by the formula of the material, frequently printed on the label. This is a dangerous and inaccurate way to buy paint because printed formulae reveal but a fraction of the story; it is true that they give the principal ingredients that were used in the paint, but they do not indicate the quality of the ingredients used nor the fitness of the type of raw materials; neither do they reveal the processing of vehicles nor the manner in which the raw materials were combined to make the finished product. There are over twenty different types and grades of linseed oil and over six types and grades of zinc oxide. How can any person reading a printed formula determine what type or grade of oil was used when there are so many kinds? All the formula reveals is that linseed oil was used.

One manufacturer might use nothing but the finest grade of raw materials available to the paint industry and pay a high price to get the qualities he desires. He might maintain costly laboratories to make sure all of the raw materials are uniform at all times and in accordance with high standards and manufacturing methods determined from a scientific basis. Some other manufacturer might use raw materials of the same name but of an inferior grade, maintain no laboratories to see that all materials are uniform, be careless in the production of the finished product, and establish no uniformity whatsoever; yet, his printed formula would be exactly like that of the other manufacturer who conscientiously puts

quality into his product.

To lower the cost of raw materials, a paint manufacturer may purchase materials of unknown qualities or may purchase those rejected by other manufacturers because of inferior grading. One salesman can talk low price; the other can talk quality and durability—which is "cheap price" after all.

Do not, therefore, buy paint on its formula unless you are a paint chemist in your own right, and not even then unless you can visit the paint factory and see for yourself what kind of control the manufacturer exercises in the making of his products and what kind of raw materials he uses.

Some industrial organizations, institutions, and architects' offices do, however, issue ironclad specifications for the materials to be used. The following is an example of such specifications for outside white paint:

Pigment:	
Carbonate of Lead	35%
Zinc Oxide	35%
Inerts	30%
	100%
Vehicle:	
Pure Linseed Oil	80%
Turpentine	15%
Driers	5%
	100%

In these cases they assume full responsibility for the entire job. There are many instances when such a method of paint purchasing is necessary, but to depend entirely upon the specifications is not recommended.

Many purchasing agents buy materials on the strength of a painter's recommendation. An interesting side light on this method will be discussed shortly.

The best way to secure the proper kind of paint or varnish of the quality needed for a job is to personally experiment with the materials you are interested in buying or have them demonstrated under your supervision. This will eliminate from the start any paint made only to sell for a low price because salesmen selling this kind of paint will know that the test of their products will eliminate their chance for a sale, and they will quickly withdraw from competition.

True, a demonstration of the material will show many of the characteristics of the paint at once but not all of them. Frequently, time will not permit the checking of the paint's washability, its durability to weather conditions, and how it will age. By aging, we mean its ability to retain its desirable characteristics as it becomes older. Is it the kind of paint that in time will become brittle, lose its bond to the surface on which it is applied, and eventually break loose, bringing with it succeeding coats of paint and leaving an ugly looking surface? An expensive repair job is necessary to rehabilitate such a surface to a good condition, and, consequently, maintenance costs are sharply increased.

Unless you can test paint for a period of two or three years before buying in any quantity, there is only one way to determine for yourself that this paint will wear: confidence in the source of supply of the material.

If you do not buy directly from the manufacturer, find out as much as you can about the organization that makes the paint. Is it reputable? Does it have an established business? How long has it been in the paint business? Are its products extensively used? Are its policies stable, or does it change policies frequently? Where has its materials been used? Visit some of the jobs where this company's products have been used if you can spare the time. Is it a leader in its field? Does it back its products if correctly used? Is it financially responsible?

Surely a manufacturer making paint, a commodity extensively used, has every opportunity to grow and to thrive if his products and policies are sound. These are but a few of the questions that should be answered to your satisfaction in order

that your confidence will be well placed and justified. No reputably established paint manufacturer or dealer is going to market an inferior product under his trade name on which he has spent hundreds of thousands of dollars and years of time to establish. To do so will quickly tear down that which it has taken years and fortunes to build, and that is what a good reputable paint concern will guard against. It will be sure that its products are right before offering them for sale.

In testing or demonstrating paints, there are many things for which to look that will determine their worth and practicability for the job they will be asked to do. Paint, to be used for realty management work, must be opaque; that is, it must cover or hide well. A simple way to judge the hiding capacity of paint is to use a checkerboard surface, having both light and dark areas. A piece of linoleum is a satisfactory surface on which to determine the comparative covering qualities. Do not judge a paint by itself; put it alongside of some other paint of similar type so that a comparison can be made. The spreading powers of the paint can be judged at the same time. Some paints go farther than others; consequently less material is needed to do the job.

Ease of application is an important factor. How does the paint work under the brush? Does the material pull or work hard or act ropy, or does it brush out freely and flow out to a smooth brush-free finish? One of the most frequent complaints of men applying paint is that it is too hard to brush out. Any painter, especially if he is doing contract work, likes a paint that will brush out easily so that he can make time on the job. If the material does work hard, the painter will quite naturally try to give it more "slip" by the use of thinners. If that is done excessively, hiding qualities will be sacrificed, and in some instances the durability of the material will also be affected.

If the material sags or "curtains" after it is applied and before it has had an opportunity of setting, it will be necessary for the painter to go back over his work to pick up these sags, resulting in a loss of time. This condition is more frequently found in high gloss paints and enamels.

Will the paint dry in a reasonable length of time? Most paints become dust free in just a few hours' time and "tack free" overnight. Paints that have these qualities collect less dirt and dust and look better. Two or three weeks after paint has been applied, it can be washed with a mild soap or cleansing solution to determine its washability. It is not fair to the paint to attempt to wash it until it is thoroughly hardened, which, in many instances, takes several weeks even though the surface of the paint is quite hard to the touch.

In exterior paints, entirely different wearing characteristics are looked for in determining how well the paint will protect the surface and in what shape it will be when the time presents itself for repainting.

It is not desirable to have a paint that is too soft; it will permit premature chalking, color fading, and a general disintegration of the paint film before its normal time. This kind of paint also becomes porous and requires special treatment with the next painting. A paint that dries with too hard a film will become brittle, will chalk, crack, and in time scale, leaving an unsightly, unprotected surface. This is also quite ruinous in so far as future paint jobs are concerned. A happy medium of the two extremes is necessary. To test materials for these characteristics involves a long period of time, and again you must accept the vendor's assurance that the paint is properly prepared.

Varnishes: Confidence in the source of supply of varnishes is even more necessary due to the similarity of all varnishes to the eye of the average layman. Some varnishes flow out better than others, have a higher gloss, are more elastic, are more washable, and consequently give better and longer service. Inferior varnish will soon wear off leaving a bare surface to

stain and become soiled. In the case of a floor, this generally means a sanding job to restore the floor to its original appearance, and this means increased maintenance costs.

It is not always necessary to buy the highest priced varnish for a surface that will be refinished every year or so; nor is it necessary to procure the finest spar varnish for interior use. This is not wise buying. However, if you are in doubt as to the type or grade of varnish that will be entirely satisfactory, buy the better grade.

At all times insist on getting good quality paint and varnish products. Good materials priced right are an economy; cheap materials are very costly, no matter if they are given to you free. It takes even more manpower to apply cheap material than to apply good material; and, as the cost of application is many times the cost of the material used, it is wise to furnish good, easy-working materials that will aid in the application.

An intelligent purchasing agent will buy as good a paint or varnish as he can consistently use on the property for which it is intended, and, by so doing, he will keep maintenance costs at a minimum over a long period of time.

I recently listened to a paint salesman give a very instructive lecture on paint. He concluded his talk with his opinions of how paint is purchased and how he wished it would be purchased, as follows:

> "In spite of the unusually good job done by purchasing agents in their buying of most products, I believe that it is a fair statement of fact that purchasing agents do a poorer job of buying paint finishes than in any other line they purchase.
>
> "The average purchasing agent is either careless or thoughtless in his buying of paint. Too many purchasing agents accept the word of the paint foreman as to the relative merits of the paint that they are purchasing instead of finding out the facts themselves. As a paint salesman, I have worked with hundreds of purchasing agents, and, in all but a few cases, I was at the absolute mercy of the painter. Nearly every good paint manufacturer and paint salesman, if he dared endanger his position with the painter, would tell you that the average painter who passes on paint products for the purchasing agent does so largely on predetermined likes or dislikes for the salesman or the manufacturer's lines, or because of petty or real gifts.
>
> "It is true that if the purchasing agent himself would buy the paint and investigate the relative merits of the various products that he is offered, instead of passing that job on to the painter, the users of paints in this country would be getting better paint at lower costs.
>
> "If you do this, let me suggest that you purchase the plain cans in which to put this paint, because practically every paint manufacturer stamps code numbers on the lids of his cans, and the painters are frequently familiar with these numbers.
>
> "In testing competitive paints, it is common practice among many paint manufacturers to give the paint to the testing department in perfectly plain cans because even in a laboratory there is a tendency to find what one is looking for or at least what he expects to find.
>
> "If the purchasing agent will devote a little more attention to his paint purchases, making an occasional trip to the laboratories of the paint manufacturer and personally investigating the claims of the various manufacturers, he will not only save his company a great deal of money, but he will acquire some information that will make his job of buying more interesting and more productive."

Equipment for painting: Assuming that the paint and varnish which we are to use are carefully selected, our next step is to select the necessary equipment for applying these products.

There are many kinds of paint brushes on the market. Often the workmen feel that the equipment to which they are accustomed is necessary if they are to work efficiently. If a regular crew of painters is maintained and proper supervision is carried on so that there will be no unusual loss of small equipment, the economical method is to purchase as good a grade of working tools as can be obtained. Brushes should be selected and an adequate supply should be available for each particular kind of work.

Spray guns should be either purchased or rented, depending upon the amount of spray work to be done. Special ladders and

scaffolds, which are sometimes necessitated by out-of-the-ordinary work, should be rented. Drop cloths, sponges, cleaning preparations, sandpaper, steel wool, etc. can be purchased through a paint supply house or, if the volume is sufficient, should be purchased directly from the original source of supply. If only a limited amount of these items is used, it is cheaper to purchase them from the supply house, as there is bound to be some loss in handling and storage.

Cleaning Materials

Cleaning materials play an important and necessary part in building maintenance. The selection and purchase of janitor's supplies is a confusing problem for buyers and users alike, which is due especially to the attempt on the part of some suppliers to surround this entire subject in a cloud of mystery and set up claims of special formulas.

There are many recognized materials developed by experience with detergent qualities that materially assist cleaning and polishing operations. These are put on the market under fancy trade names at unreasonable prices, and extravagant claims are made for their accomplishments. The problem for the buyer is to recognize these special products for what they really are. Anyone who is sufficiently interested can do this. For a nominal charge the United States Bureau of Standards will supply pamphlets containing recipes, formulas, and processes; or information which will take most of the mystery away from these "special" products may be secured at any book store.

Intelligent buying is nullified often through unintelligent use and careless and improper application by building employees. Not only are the results unsatisfactory, but too often permanent damage to surfaces is sustained.

Painted surfaces, for example, may be injured and serviceability decreased through the use of a product containing a sharp abrasive or a chemical compound never intended to be so used. This situation is appreciated by every buyer and building manager.

Cleaning compounds, generally speaking, may be classified into two divisions: soap solutions and chemical cleaners.

Soap solutions: Soap solutions are marketed in the form of powders, pastes, or jellies; powders are more generally used because of easier application and solubility. In addition, they are marketed in more convenient packages.

Soap or washing powders usually contain from 15 per cent to 20 per cent anhydrous soap with the balance of crystallized sodium carbonate and often other builders or fillers such as borax, trisodium phosphate, etc. If the building demand justifies, this product should be bought in bulk rather than in package form because of the price factor. Powder is used extensively for paint washing and general cleaning purposes and can be bought in barrel lots at from four cents to five cents per pound.

A scouring powder is a soap powder to which has been added an insoluble abrasive of powdered pumice, volcanic ash, quartz, marble, or feldspar. Too often ordinary silica is used for an abrasive. Such a powder is not recommended for general use.

Chemical cleaners: Chemical cleaners, as distinguished from soap solutions, may be classified as alkaline cleansers, for example: ammonia, borax, soda ash, neutral soda, sodium carbonate, and special alkalies such as trisodium phosphate, many of which are used in connection with soap cleaners for their detergent and water-softening qualities.

Trisodium phosphate is a white granulated product; it contains usually a small amount of sodium hydroxide or sodium carbonate and is readily soluble in water. It is suitable for a variety of cleaning purposes such as dish washing, bottle washing, laundering, and cleaning floors and painted surfaces. Under its technical name, it can be purchased in barrel lots at

about four cents per pound and is very generally used as a base for many cleaners marketed under trade names at greatly increased prices. Diluted and compounded with other detergents, it is an efficient cleaner for painted surfaces, particularly wall and paint washing in kitchens where the stain is of a greasy character. Very satisfactory products are available from reputable manufacturers at from seven to nine cents per pound in barrel lots.

Mopping powders are used extensively for cleaning marble and tile floors and generally may be classed as scouring powders.

Soap chips and flakes are designed for laundry purposes and should be purchased, as far as possible, in bulk rather than package form.

Liquid soaps for handwashing generally conform to specifications that they shall be made up of pure coconut oil saponified with potash and contain from 12 to 20 per cent anhydrous soap content. A denser material may be bought with about 40 to 50 per cent soap content to be diluted locally at some saving in price, but the saving in cost may be lost when too much or too little water is added. A purchasing agent without laboratory facilities for testing the guaranteed soap content is very much at the mercy of the supplier; it is, therefore, well to buy this article from a source in which he has confidence.

Toilet soaps should be neutral and free from excess alkali, which is injurious to the skin. Free lathering is desirable, and this effect is often accomplished by the use of coconut oil or olive oil. It is advisable for a buyer to select a reputable standard toilet soap and not try to save money on a cheap soap.

Toilet bowl cleaners are generally offered under special brand names. The chief ingredient of these is usually sodium bisulphate; however, trisodium phosphate may also be used successfully. The daily cleaning of toilet bowls should obviate the necessity for special cleaners of this type.

FLOOR OIL

Floor oil or dressing for wood floors is for the most part a pale paraffin oil sold under a trade name without any processing or with a small amount of turpentine and a few drops of cedar leaf added to give the dressing a more agreeable odor. Often the consumer pays three or four times the original cost of the paraffin oil for the so-called processing.

FLOOR SEALS

Floor seals that penetrate into wood floors without the usual type of surface film produced by varnish have a china wood or tung oil base, which appears to have the power to penetrate wood to a greater extent than is usually the case with the ordinary type of vehicle. Different synthetic gums are employed in the manufacture of these sealers, but the extravagant claims of the manufacturers of particular products sold under private brand names are seldom realized. There is no doubt some virtue in the idea of a penetrating wood seal for preservation purposes. There are certain types of such seals available that have the approval of the Maple Flooring Manufacturers Association; but, for the most part, results are not justified by the cost of the preservation.

For hardening concrete or terrazzo floors, a number of effective and reasonably priced brand products are on the market, which consist of magnesium silico flouride crystals or sodium silicate.

DISINFECTANTS

The sale of disinfectants, the use of which has been stimulated by publicity of the "germ danger," has been the source of considerable profit. About the most that can be said of the usual disinfectant on the market is that it may, for a time, substitute one odor for another, but the fact still remains that cleanliness usually eliminates the difficulty.

The following statements from the Journal of the American Medical Associ-

ation of March 28, 1931, are pertinent and should be given authoritative consideration:

> "In combating contagion, modern sanitary practices have eliminated disinfectants for spraying walls, ceilings, and floors of school rooms.
>
> "The source of infection is the individual. So long as the infected individual is present in the room, any disinfectant that might be used on the walls or floors would be of little value in preventing infection. Removal of the infected individual usually suffices to end the danger of spreading the infection.
>
> "Soap and water is the best agent for cleaning floors, together with plenty of fresh air and sunshine. It is unnecessary to worry about contagious disease organisms that may be lodged on the walls or ceilings. The same rule applies to toilets and urinals. Cleanliness will take care of the whole problem without resort to strong disinfectants. In fact, terminal disinfection, such as fumigation with formaldehyde, has been generally discarded as valueless.
>
> "In the case of lavatories, urinals, and toilet bowls, so-called germicides in reality accomplish nothing except covering up the primary odor by the stronger odor of the chemical used."

Also, a statement in "Your Money's Worth," by Chase and Schlink, is interesting from a price point of view:

> "Disinfecting spray, made of formalin, perfume, and Lake Michigan water, was marketed under a brand name at the rate of $62.00 a barrel. When its composition was made known, the price dropped to 47¢ per barrel. Many materials commonly sold as disinfectants have no disinfecting value at all—they merely give a pleasant odor, or one suggesting cleanliness. Yet real disinfectants are so cheap (costing $1.50 to $5.00 a barrel to make) that there is no possible need—save the desire to collect what the traffic will bear—to offer any but an effective product. Theatre and hotel owners will be interested to know that most deodorants are oil (20¢ per gallon), with 2 per cent of pine oil added, making a total cost of say 22¢ a gallon. The manager will pay in the neighborhood of $2.50 per gallon."

If, however, the use of a disinfectant is deemed advisable for psychological reasons, pine oil, which has an agreeable odor, may be used for the purpose.

Drain Solvents

Drain solvents are another item in a janitor's supplies which have been promoted by suppliers as being a mysterious composition of chemicals and marketed under special trade brands at fancy prices. Most of these products consist of sodium hydroxide (caustic), sometimes with aluminum shavings added to produce a boiling effect. They are all about equally effective and range in price from ten to twenty cents per pound depending upon the advertising costs behind them.

Insecticides

Any building may be subject to roach infestation, the most common source being from deliveries from food and grocery stores; and, if uncontrolled, they can be the subject of much complaining from tenants. The important thing is to take measures for their eradication before an opportunity is given for them to increase. Powder is almost universally used for this purpose, the killing agent for which is sodium fluoride or pyrethrum mixed with flour or borax. Trade brand products sell from seventy-five cents to $1.25 per pound but may be bought in bulk from concerns of repute for from fifty to sixty cents per pound. Usually a janitor is competent to handle a roach infestation, but often a district in which a building is located and the character of the tenants justify the employment of a good exterminator who will undertake to keep the property free of all vermin upon a yearly contract basis.

Polishes

Furniture and automobile polish should remove dirt and grease rapidly, restore the luster, and yet not leave the surface in such a condition that it will hold dust or have a disagreeable odor. Furniture and automobile polishes should contain no alkali; the emulsion should be stable, and the oils and solvents used should be considered with the view of omitting those that will attack lacquered surfaces.

Oil polishes consist wholly or mainly of mineral oil. They are cheap, do not oxidize,

and give a glossy polish if rubbed off thoroughly. Mixtures of mineral and linseed oil, usually with other ingredients, are also used. Some emulsion polishes contain wax, usually beeswax, but carnauba wax, which has a higher melting point, is to be preferred. All furniture polishes require rubbing to remove the greasy effect, regardless of the claims to the contrary. Oil soluble dyes are often employed for color, and oils essential to impart an agreeable odor or to mask a disagreeable one are often added. A satisfactory emulsion polish can be purchased for about $1.50 per gallon.

Metal polishes usually consist of some abrasive material in suspension in a liquid or semiliquid vehicle, the abrasive generally used being oxide of iron or precipitated chalk for highly polished surfaces.

Pastes are often employed, but as a rule the liquid polishes are considered more efficient where much tarnish is to be removed. Ammonia is often used, and sometimes essential oils are added to mask the odor of other ingredients. An effective metal polish may be purchased for about $1.00 per gallon.

With all cleaning compounds, floor oils, sealers, waxes, and kindred products, the job of the purchasing agent is to secure the best material for the purpose for which it is designed—and at a fair value. To do so, he must be familiar with the work to be done and the result demanded. He should know the composition of the products he is buying and have a fair idea of the ingredients entering into such products. He should favor those suppliers who are entitled to his confidence by honestly analyzing a product for him and who offer it at a reasonable price. Special products for particular purposes may be developed where a mutual confidence exists.

TOWELS

Every large building uses a quantity of towels. A number of years ago practically all towels were of cloth. The most popular was the towel on the roller.

Due to cost, cloth towels are not used as much as they once were. Cloth towel companies, however, are making a strenuous drive to regain their old business and are now offering to install individual cloth towels at the same price the buyer is now paying for paper. Whether or not such an arrangement can be satisfactorily worked out remains to be proved. Most people agree that cloth towels are preferable, the costs being equal.

Paper towels are generally sold by the case. Some of the companies selling these towels make very extravagant claims as to their economical value and the satisfaction to be obtained by using their particular towel. In fact, some of the claims are so exaggerated that a buyer often hesitates to make the necessary tests because his common sense tells him that he cannot possibly make the savings the salesman claims are possible. In the purchase of paper towels, the primary object is to satisfy the people who are to use them. The second is to do this economically. The majority of paper towels are composed of the same raw material, which the various manufacturers have their own method of converting. The most common method of determining the value of paper is by weight. If towels are weighed, it will be found that we pay about the same price per pound for any towel we purchase.

There are a number of other tests to be made in the purchase of paper towels. Their absorbency can be determined by the placing of an equal amount of water on each of two samples and seeing which absorbs in the most satisfactory manner. Towels can be tested for strength by wetting each sample equally and then pulling the towel apart. In making these tests, try to use as closely as possible the same amount of water that would be present in the event of ordinary use.

There are various shapes and sizes of towels on the market. Some towels are rough, and some are very fine. Some towels are bleached white, and some are draft pulp—but all with a definite sales

appeal through which the seller hopes to please the buyer.

In choosing a towel, we should also be influenced by the work we expect it to do. Before undertaking to make a selection, the buyer should be thoroughly familiar with the work the people do and the number of times it is necessary for them to wash their hands during the average day.

Wiping Rags

There are so many unreliable concerns selling wiping rags that it is essential for a buyer to contact a concern whose products conform to the following specifications:

1. Rags that are thoroughly washed and sterilized, assuring the user that they are entirely sanitary.
2. Rags that do not contain parts of sweaters, blankets, and other usable materials. Many concerns use these materials solely to add weight to the bales.
3. Rags that are correctly weighed. Some concerns who are aware of the absence of scales in the buildings they are supplying often short-weight shipments.

The selection of wiping rags, of course, depends upon the use for which they are intended. Pure white rags are used for polishing, cleaning, and general use. Colored rags are used by painters, engineers, and those doing similar work. Sugar liners are used for window washing and dusting. These are considerably more expensive but give a much longer period of service as they can be rewashed several times before they are worn. Cheesecloth is used for dusting and polishing and is substituted for sugar liners when laundry service is not essential.

Waste

Waste is used by janitors, engineers, etc. for wiping purposes around motors, boilers, and the like as it is highly absorbent and can be used with greater facility on motors and machine parts.

The first grade is an all-thread waste that contains a large amount of staple and much body and can be obtained either white or colored. This grade is chiefly used on machinery and motors as it has a long filler that does not shake out easily. The second grade is made of threads and rags, contains some short pieces of thread, and comes only in white. This quality is used for wiping purposes in boiler rooms, etc.

From a psychological standpoint, the white waste, while initially expensive, is more economical as the user will not discard a white waste until it is very black, whereas a colored one is thrown away before its usefulness is over.

Mops

Mops are used for both cleaning and dusting. Under the first category comes the "wet" mop used with water, soap, or mopping preparations. The second covers the dry mop, which is frequently saturated with an oil polish by the manufacturer, and the dry dust mop used for floors, walls, and ceilings.

Mops should be purchased from a concern which carefully selects its yarns and should be made of long staple cotton. For heavy work, and where the mop is to be used on rough surfaces, the cotton should be very tightly spun. The more loosely spun and more absorbent mop can be used on a smooth surface.

The price of mops should always be worked out upon a pound basis, and if careful selection is made of the quality, it is very simple to obtain competitive figures and decide where purchases should be made. A report should be obtained from the persons using mops as to any defects they may find, but the entire choice should not be left to some janitor.

Brooms

There are many different types of brooms, and the selection of them depends a great deal upon the use for which they are intended. Janitors, as a rule, use a five-sew, heavy, corn broom for inside work. This broom is not made for use in basements or outside. For outside or basement use, a heavy warehouse or fibre broom should be selected. Usually janitors

use push brooms made of horse hair for sweeping halls, corridors, and other large areas.

The cost of brooms depends upon the amount and quality of the material used and the number of times it is bound together.

After we have selected the proper broom for the work to be accomplished, we have only to be sure that it is properly sewed and of the weight specified. The price should vary in accordance with the weight of the material used.

THE PURCHASING AGENT

The duties of a general purchasing agent may be varied, depending on the size of the company and the type of business in which it is engaged. The purchasing agent for a large company buying supplies must be at all times conversant with market conditions governing prices. He must run tests so that he is in a position to substantiate the reasons for his purchases. Tests must be made of the delivered products as well as samples submitted as chemical products are often hard to control in the process of manufacture. The purchasing agent may receive assistance from the engineering department in performing these services. In addition to making tests, the buyer should check at regular intervals to see that the materials being purchased are correctly used, and where a new product is put into use, he should be sure that everyone is thoroughly instructed.

The purchasing agent for a small concern has numerous duties in addition to those performed by a buyer for large companies. His duties are oftentimes split between purchasing and other functions that are closely allied. In such cases it is often natural that some of the necessary research work be slighted as this is the easiest part of the routine to be dropped.

The purchasing agent who is a smart trader not only buys, but he sells the vendor on the idea that a sale at the buyer's price is desirable. In addition, he sells the vendor on the idea that his firm is a desirable account. Oftentimes he can bring about very advantageous transactions, not by petty methods, but by showing the seller that a satisfactory deal is mutually advantageous upon the basis outlined by the buyer.

The purchasing agent's own initiative and ambition will determine whether he is to be an order clerk, forwarding orders to firms as indicated by someone else in his company, or whether he is to be a real purchasing agent, seeking his own sources of supply and constantly advancing new ideas and building up the faith of his superiors in his judgment and business ability. The officers of his organization should recognize such ability in a buyer and not hamper his efforts by trying to influence his judgment unduly from either the sales or production standpoint. Purchasing agents who are natural "traders" will take these sales and production factors into consideration and, in the placing of their business, will be governed accordingly.

* * *

Agency

By ANDREW C. HAMILTON

EVERY person engaged in property management is fundamentally and at all times an agent—an agent for those clients who have entrusted him with the care and operation of their properties. Such is the very nature of the profession. For example, the property manager is an agent when he negotiates leases, when he contracts for fuel and decorating, when he collects rents, when he pays taxes, and when he makes reports to his clients. Thus, the law of agency very directly and very intimately enters into all of his daily work and is of great importance to him.

Strictly defined, agency is the relationship which arises when one party authorizes another to create, to modify, or to terminate contractual relations between the first party and a third party. There are always three persons concerned in any act performed by an agent: the principal (for whom the agent acts), the agent, and some third party with whom the contract is or may be formed.

AGENCY DISTINGUISHED FROM OTHER RELATIONSHIPS

Only two parties are required to create the very similar relationship of master and servant. The laws relating to master and servant are so much like those pertaining to agency that the rules of agency discussed in this article will be deemed to apply to either relationship unless stated otherwise.

It is essential to distinguish between an agent and an independent contractor. One person may contract for the services of another in such a way as to have full control over the manner in which the one employed does the work, or he may simply contract for a given result. If the agreement provides that the second party is to accomplish a certain result and that he has full control over the manner and methods to be used in bringing about that result, he is regarded as an independent contractor, and the one receiving the benefit of his services is in no way responsible to a third person for his acts. If, however, the second party places his services at the disposal of the first in such a way that the first party retains control over his acts, an agency is created.

Suppose the roof of Peterson's building needs repairs. He has Allen inspect it and estimate what he would charge to put it in first-class condition. It is estimated that the cost would be $400, whereupon Peterson contracts with Allen for the repair of the roof at that figure. In performing the work, it becomes necessary for Allen to purchase $250 worth of materials, which he buys on credit. Is Peterson liable for the materials in case Allen fails to pay for them? No. Allen is an independent contractor, not an agent of Peterson. Apply these three tests to such a problem: (1) Who has control of the details of the work? (2) Who has power to engage and discharge employees? (3) Is the person employed to accomplish a certain result or merely to do work under the direction of the principal?

APPOINTMENT OF AGENTS

Anyone who may act for himself may act through an agent. There is one important exception to this general rule—the weight of authority is that any appointment of an agent by an infant is void (not merely voidable as is an infant's contract). However, an infant may act as an agent for someone else, and any agreement which he makes while acting for his principal is binding upon his principal.

Contracts which delegate authority to an agent, like any other valid and enforceable agreement, must have a legal

object for their purpose. The courts will not force the parties to carry out an agency agreement which is for an illegal purpose.

The usual method of creating an agency is for the principal expressly to confer certain authority upon the agent. This authority to the agent may be explicit, or it may be in very general terms, to be interpreted in the light of custom and business usage. No particular formalities are necessary, and the authorization may be either written or oral.

There are two well-recognized exceptions to this last statement. First, where the purpose of the agency can be fulfilled only by the signing of a formal document under seal, the agency must have been created under seal. Such an authority to an agent is usually called a power of attorney. Second, the law of most states requires that any agent who is given power actually to enter into a contract on behalf of his principal for the sale or conveyance of an interest in real estate must obtain that power by a written authorization from the principal. This rule is not usually extended to the signing of short term leases by the property manager as agent of the owner. However, some states do go so far as to hold that any agent who possesses authority to sign a written contract of any kind (such as a lease) must receive his appointment in writing.

Whether required by law or not, it is always best for a property manager to have a written management agreement with the owner—a written delegation of authority to the property manager as agent of the owner. This procedure is exact and "businesslike"; it creates a favorable impression on the owner and goes a long way toward avoiding misunderstandings between owner and manager.

The purported agent cannot, by his own conduct alone, establish an agency relationship. It is the duty of a third person dealing with a purported agent to ascertain the agent's authority. If the agent has no authorization from the principal, then, generally, the principal is not bound by the acts of the person representing himself to be the principal's agent. There are a few such situations in which the principal may, because of his conduct, be estopped to deny that the agency exists. The person seeking to establish the agency by estoppel must have known of such conduct and acted in reliance upon it.

Agents are ordinarily selected because of their personal qualifications. Hence, the general rule has developed that an agent may not delegate his duty to someone else and invest the latter with authority to bind the principal. There is an exception to this rule in those situations where the acts of the agent are merely mechanical or ministerial. An act which does not require the use of any discretion and is purely mechanical may be lawfully delegated by the agent to a subagent.

Another exception exists where the situation is such that it is impossible to carry out the purpose of the agency without the appointment of subagents by the agent. Thus, a manager placed in charge of a branch store is legally presumed to have the authority to employ the needed help.

AGENCY BY RATIFICATION

Ratification is the affirmance of an act performed by one person as the purported agent of another without having actual authority as an agent. The ratification cures the defect of lack of authority, and the relation of the parties thereby becomes the same as it would have been had the authority actually been granted before the act took place.

Upon ratification, the authority reverts back and becomes effective as of the date of the act performed by the agent. Therefore, ratification can be effective only where both the principal and agent were capable of doing the act at the time it was performed and are still capable at the time of ratification. For this reason, a corporation cannot ratify contracts

made by its promoters before the corporation was lawfully in existence and its charter issued.

An unauthorized act cannot be ratified in part and rejected in part. An act of an agent may be ratified only when the agent holds himself out as acting for the one who is subsequently sought to be held liable as principal. The agent must have professed to act as an agent. Thus, an agent of an undisclosed principal who exceeds his authority can never bind his principal, even though the transaction is later adopted by the principal.

The law in most states is that the third party may withdraw from a transaction at any time before it is ratified by the principal unless he acts with full knowledge of all the important facts.

Ratification may be either express or implied. If formalities, such as a written authorization under seal, are necessary to create a particular agency, then ratification must follow the form required for the creation of the agency. Except in such a situation, any conduct which definitely indicates an intention on the part of the principal to adopt the transaction will constitute ratification. Mere silence of itself indicates adoption of the transaction only when it is connected with some action, such as retention of goods or some other conduct which clearly indicates to a reasonably prudent man an intention by the principal to retain the benefits of the transaction.

Scope of Agent's Authority

The principal is responsible for all those acts of the agent which are performed within the scope of the agent's authority.

The rule sounds simple. The real difficulty arises when one tries to determine the scope or limits of the agent's authority in any particular situation. There are, however, certain well-defined and established ideas which are of assistance in determining the scope of an agent's authority.

An agent unquestionably possesses all those powers which are expressly conferred upon him. He also possesses those incidental powers which are necessary for carrying out the primary purpose of the agency.

The limits of an agent's powers may be broadened or narrowed by the existence of a general usage or custom in the locality in which the agent carries on his activities. Moreover, the custom of a particular type of business has an important influence on the authority of an agent. Even the customs of a particular principal in the conduct of his business may aid in determining the incidental powers of his agent.

Secret limitations placed upon the powers of an agent are not binding upon third parties unless the attention of such third parties has been drawn to them; that is, a third party, who has established the fact that an agency exists and who, in a general way, has determined the limits of the authority, is not bound to look for unexpected and unusual restrictions. The third party is justified in assuming, in the absence of contrary information, that the agent possesses those powers which such agents customarily have.

An existing emergency which necessitates immediate action on the part of the principal or his agent may add enough to the agent's powers to enable him to handle the situation. It is only when the principal is not available that the agent's powers are thus extended. Moreover, the agent's powers are not thus extended any more than is sufficient to meet the emergency.

Notice or knowledge acquired by an agent while acting within the scope of his authority is binding upon the principal, provided the notice has been acquired by an agent who represented the principal with regard to the particular subject matter involved. Notice which is acquired before the creation of the agency and which is later retained by the agent while representing the principal is generally regarded as binding upon the principal. Notice to an agent where he is under a

duty to some other person not to disclose the information does not affect the principal.

SCOPE OF PARTICULAR AUTHORITIES OF AGENTS

The ordinary real estate broker possesses no authority in the absence of an express grant of such power to enter into a contract for the sale of property listed with him. The broker has earned his commission as soon as he has found a willing buyer upon the terms set out by the principal.

The power of an agent to collect a bill owed to his principal is not readily implied by the law. It has been held that even the possession of a statement upon the principal's billhead and in the principal's handwriting does not justify an assumption by a third person that the agent has power to collect the bill.

A sales agent behind the counter who sells goods at retail has an implied power to collect for them at the time of the sale. If, however, the sale is on credit, the sales agent has no power to collect at a later date unless such is the practice of that particular business. The agent who delivers goods which have been sold for cash has a right to collect all payments due at the time of delivery. A traveling sales agent who merely solicits orders has no authority to collect as payments fall due unless some payment is to be made at the time the order is taken.

An agent who is given special authority to purchase—and not held out as a general purchasing agent—is limited to the quantity and quality of goods designated in his authorization.

A general agent placed in charge of a business is presumed to have authority to purchase either on credit or for cash.

LIABILITIES OF DISCLOSED PRINCIPAL TO THIRD PERSON

The principal is liable, of course, to the third person upon any contract made by the agent so long as the contract relates to matters within the scope of the agent's authority and is properly executed. In so far as ordinary contracts are concerned, most states permit their courts to examine evidence other than the contract itself when it is necessary to determine the intent of the agent and the third party with regard to an ambiguously executed contract.

Under the Negotiable Instruments Act, no one can be held liable on negotiable paper unless his name appears thereon. Therefore, an agent should be particularly careful to see that any negotiable paper executed by him as such agent bears his principal's name and his own name in such a way that it unmistakably shows that the negotiable paper is executed by his principal "by" or "per" him as agent.

LIABILITIES OF UNDISCLOSED PRINCIPAL TO THIRD PERSONS

When the agent signs a contract in his own name, leaving the third party unaware that there is any principal, there is legally an undisclosed principal's contract. Such agreements are, of course, always entered into by the third person on the strength of the agent's credit.

In such a case, the third party, upon learning of the principal's existence and identity, may elect to collect either from the agent or the now disclosed principal. After disclosure, the third party may evidence his election by obtaining a judgment against one of the parties or by making an express declaration of his intention. Very definite action is essential to constitute an election.

Suppose that in an undisclosed principal situation the principal had supplied the agent with money to buy the goods but that they were actually delivered to the agent upon the strength of his own credit. Under such circumstances the principal is relieved of liability. Likewise, a bona fide settlement between the agent and the principal after the contract is made and the goods delivered but before disclosure of the principal to the third person re-

lieves the principal from liability.

Liability of Principal for Agent's Torts

The principal is liable to third persons for any damage caused them by the negligence of the agent so long as the agent is acting in the course of his employment. The test is: Was the agent about his principal's business when the tort was committed? The fact that the agent has combined his own business with that of the principal does not relieve the principal from liability unless the agent has quite definitely departed from his principal's business at the time of the accident.

The principal cannot avoid liability by proving that he had ordered the agent not to do the particular act complained of or by evidence that the agent had misunderstood the instructions and was not doing the work his principal had instructed him to do.

Suppose the tort arises from a willful and deliberate injury of the third person by the agent; then, if the act has nothing to do with the principal's business and is motivated entirely by the ill will of the agent toward the third person, the principal is not liable. However, if the motive is primarily to advance the principal's interests, it has been held that the principal is liable.

Liabilities of Third Person to Principal

The disclosed principal may enforce in his own name any contract made by the agent for the principal's benefit—if properly authorized.

The undisclosed principal is entitled to performance by third parties of all contracts entered into on his behalf and for his benefit by the agent except contracts involving the skill or confidence of the agent. The undisclosed principal always takes over contracts subject to all defenses which the third person could have established against the agent.

Duties and Liabilities of Agent to Principal

The duties of the agent to his principal are governed by the contract of employment. In addition to the duties expressly placed upon the agent, there are five others imposed by law because of the confidential and fiduciary nature of the relationship between the principal and the agent: (1) the duty of the agent to be loyal to the principal; (2) to obey all reasonable instructions; (3) not to be negligent; (4) to account for all money or property received for the benefit of the principal; and (5) to inform the principal of all pertinent facts of which the agent has knowledge.

Because of the duty to be loyal, the agent cannot engage in any business which competes or interferes in any way with the business of the principal. Likewise, the agent cannot lawfully, without the knowledge and express assent of the principal, sell his principal's property to himself or buy for his principal property which the agent owns or in which he has an interest. For the same reason, a broker cannot represent both buyer and seller or lessor and lessee without the consent of both parties. All profits made by an agent through any violation of any duty he owes to his principal may be recovered by the principal from the agent.

This same duty of loyalty demands that all information of a confidential nature acquired while in the service of the principal shall not be used by the agent to advance his own interests at the expense of his principal's best interest. A distinction must be made, however, between the use of skill acquired and the use of secret information, between knowing customers of a former employer and copying a list of customers. The agent may, even though discharged, rightly make use of his skill or his acquaintance with customers—even for the benefit of a new principal.

An agent is presumed to give all of his time wholeheartedly to advancing his principal's interests.

It is the duty of the agent to obey all instructions given by his principal so long as they refer to acts contemplated by the contract of employment. An instruction may not be disregarded even though it may seem unusual and fanciful or even impractical to the agent. The motive of the principal in giving the instruction is not of any importance. The duty to obey orders applies to an agent who acts without compensation as well as to one who is paid for his services.

The duty of the agent to remain within the scope of the authority conferred is another example of the duty to obey.

An instruction to do an illegal or immoral act or an act which will impair the security or position of the agent may be disregarded by him.

Where, because of changed conditions, the old instructions would, if followed, practically destroy the purpose of the agency, it becomes the emergency duty of the agent, provided the principal is not available, to exercise his best judgment in meeting the situation.

The usual effect of a failure to follow instructions is to make the agent liable for the resulting damage. Also, it may justify a termination of the agency. If the violation merely is in the manner in which the task is performed, the agent may not be discharged unless he persists in disobeying orders.

All agents are presumed to have and to exercise that degree of skill and diligence ordinarily possessed by and expected of those who perform like acts.

Money or property intrusted to the agent must be accounted for to the principal. Therefore, the agent must keep records adequate to prepare a complete accounting. Money collected by an agent (a property manager) for his principal should not be mingled with funds belonging to the agent. If money collected for the principal is deposited in a bank, it should be kept in a separate account and so designated that a trust is apparent. Otherwise, any loss resulting from an insolvent bank must be borne by the agent.

The principal may follow any funds misappropriated by the agent until they have come into the hands of an innocent holder for value.

It is the duty of an agent to tell his principal of all facts which vitally affect the subject matter of the agency and which are obtained within the scope of the agent's employment.

DUTIES AND LIABILITIES OF PRINCIPAL TO AGENT

It is, of course, the duty of the principal to employ the agent in accordance with their agreement and to pay the agent the agreed compensation or the reasonable value of his services. Money reasonably expended by the agent in behalf of the principal may be recovered from him by the agent. Likewise, the agent is justified in presuming that instructions given by the principal are such as he lawfully has a right to give and that the performance of such instructions will not injure others. Therefore, if this is not the case and the agent by obeying instructions incurs a liability to some other person, the principal is then under a duty to indemnify the agent against loss.

The duty of the employer or master to protect his employees or servants from personal injury was exceedingly limited under common law. The risk of injury from the negligence of a fellow employee, for example, was regarded merely as one of the hazards of labor for which the employer was in no way responsible. Hence, today we have the Workmen's Compensation Acts, other compulsory insurance, and all sorts of safety legislation to give the employee a measure of protection from such hazards.

LIABILITY OF AGENT TO THIRD PERSON

The agent seldom is liable to third persons upon contracts entered into for a known principal. By proper execution of the contract, he negatives any personal responsibility. But if the agent himself

voluntarily assumes the burden of performance in his personal capacity, he then becomes liable in the event of nonperformance by his principal.

The agent of an undisclosed principal, of course, always assumes personal responsibility.

If the agent is held liable, he in turn may recover from his principal.

Every agent impliedly warrants to third persons that he has power to do the acts undertaken on behalf of his principal. If he acts without authority, he becomes liable to third persons for the damages resulting from his failure to bind the principal. Also, an agent who intentionally misrepresents his authority may be liable to third persons for the damages resulting from his fraudulent conduct. The agent may avoid liability arising from lack of authority by a full disclosure to the third person of all facts relating to the source of his authority. The agent is not liable when, unknown to him, his agency has been terminated by the death of his principal.

Every agent who deals with third persons warrants that his principal is in existence and is a competent party to enter into a contract. However, if the third person is fully informed that the principal is an unincorporated organization or other incompetent party and agrees to look entirely to it for performance, the agent is relieved from responsibility. Where the principal is a corporation, the agent does not warrant that his principal has legal capacity to enter into the particular transaction.

An agent who, in the course of his employment, receives money from third persons for the benefit of his principal owes no duty to account to the third persons. On the other hand, money paid to an agent who has no authority to collect it, and which is not turned over to the principal, may be recovered by the third person from the agent. Where money is paid to an agent in error (such as overpayment of an account) and the agent has turned the money over to the principal before the error is discovered, it is only the principal who is liable. Money which is still in the possession of the agent when he is notified of the error should be returned to the third person by the agent. Any payment to an agent made in error, caused by his misconduct or mistake, may always be recovered from him, although he may have surrendered it to his principal.

An agent is always liable to third persons for the result of his negligence or other tort.

Liability of Third Person to Agent

Normally, the agent has no right to sue third persons on contracts made by him for the benefit of his principal. Only where he binds himself intentionally or ineptly (by improper execution of the contract) or where he acts as agent of an undisclosed principal may the agent sue the third person.

In many states an agent may sue the third person on a contract in which the agent is interested because of anticipated commissions. Also, an agent who has been vested with title to commercial paper may sue the maker thereof.

Torts committed by third persons against the agent give rise to a cause of action under the law, irrespective of any agency. It should be noted that any person who maliciously influences the principal to terminate his agent's employ thereby commits a tort and must compensate the agent for any damages which result. Likewise, any person who influences another in breaching a contract in which the agent is interested thereby commits a tort.

Termination of Agency Relationship

An agency may be terminated by an act of the parties or by operation of law. Naturally, an agency which is created to continue for a definite period of time ceases by the agreement at the expiration of that time. If the parties by mutual consent continue the relationship beyond that

period, the courts imply the formation of a new contract of employment for a similar period upon the same terms. An agency created to accomplish a certain purpose automatically ends with the completion of that task. Wrongful termination of the agency by either party makes him liable to the other party for damages. The death, insanity, or bankruptcy (in case it affects the subject matter) of either principal or agent terminates the agency by operation of law. In such a case, no notice need be given.

If the agency is terminated by act of the parties, it becomes the duty of the principal to notify all third persons who have learned of the existence of the agency of its termination. The principal is under a duty to see that those who have previously relied upon the agency by dealing with the agent actually receive notice of the termination of the agency; as to those who have never previously dealt with the agent but have learned of the agency, the principal is under a duty to give newspaper publicity only to the termination of the agency.

A true "agency coupled with an interest" is one in which the agent has a legal or equitable interest in the subject matter. It cannot be terminated without the consent of the agent and is not terminated by the death of the principal. An "agency coupled with an obligation" is one in which the agency is created as a source of reimbursement to the agent because of money owed him by the principal. It cannot be terminated without the consent of the agent during the lifetime of the principal but is terminated by the death of the principal.

The property manager is an agent, and these legal principles all apply very directly to the relationship between him and his clients.

* * *

Labor Relations in Realty

By CLEMENT E. MEROWIT

PERHAPS the most significant problem which engages industry today is that of labor and its future demands. We have seen this young giant grow conscious of his strength. He has been educated to believe that he has been unscrupulously exploited and that a paternal state wishes to see him given his rightful heritage—nothing less than the lion's share of the results of production and commerce.

In this country, labor unions have not as yet been compelled to establish themselves upon a wholly responsible basis. They offer enticing opportunities for profitable exploitation by shrewd students of mob psychology. No longer is money the primary objective of these so-called leaders; today the lust is for power. Dollar bills have lost their all-absorbing charm. You cannot work money up into frenzied support of your pet hates. Who ever heard a thousand silver dollars cry out for blood? No, to be sure, it is a much more exciting game playing with impressionable souls!

Those of common sense, objectivity, and constructive purpose for a common good must array themselves against unscrupulous, irresponsible, subjective powers which prefer incitement to force.

Industry has recognized somewhat tardily that it has been (or thought it was) too busy to preserve an active, personal interest in its producers. Today it is trying (blindly in many instances but nevertheless trying) to re-establish the bond between *management* and *men*. It recognizes that this is no simple task and that it requires the full time of specialists. It is not unreasonable to predict that in the near future every large enterprise will have its individual labor relations counsel at its elbow.

Real estate will be no exception. Realty owners, often tardy to introduce fundamental procedures which have proven their value and become bywords in other fields of endeavor, sooner or later must take proper stock of the problem and call in a doctor. It will likely be *sooner*, for realty lacks the resources and the coordination essential to a successful campaign against labor demands, which, under existing conditions, may well wreck the industry.

LABOR RELATIONS IN APARTMENT BUILDINGS

Let us examine the problem as it affects one particular type of real estate—the apartment house. The essential function of apartment house operation is to provide the background of a home with certain centralized services. The character of these services and the manner in which they are provided are often as important to the landlord's guest as is the space itself. Since the landlord is in the position of a host entertaining a guest whose good graces he seeks, and since he wishes the guest to remain indefinitely, it behooves him to take an interest in his servants and to see that they are well trained. This is particularly true today, for the landlord, as a rule, is an individual whose family of tenants is large and upon whom the complicated demands of capable property management are such as to permit him little if any personal contact with his guests.

It is accepted beyond question that the proprietor's personal interest in his customers is often a prime consideration, responsible for the thriving business. This applies in the relationship between landlord and tenant as well as in a restaurant or any other business. Since the landlord, in most instances, is unable to show personal attention to his "customers," it is essential that he rely upon his staff. It follows in turn that the staff must be educated in his philosophies of service so

that they in turn can convey to the house guests the warm interest of the landlord and his desire to see their continued satisfaction realized.

Education of the personnel is not a matter which may be accomplished by simple prescription. It is a highly individual affair, and, to avoid mechanical results which are not of a satisfactory nature, it requires the conveyance and infiltration of certain personal enthusiasms. I am reminded of a particular hotel service of prominence which calls for a specified address to the guest when he first steps into the elevator in the morning. While flattering enough at first, the prompting is soon detected, with the result that the guest is prone to discount subsequent attentions as insincere.

Men must be taught not so much precisely what to say and do in their jobs as an attitude toward their work; a wholesome position toward their confreres; a conscientious interest in those they serve; and a respect and genuine loyalty toward those for whom they work—*and this must be earned.* In short, the problem is one of personalities rather than behavior. We must understand that most employees look to economic stress as the root of all their problems. Educated of late to believe they have been the sorely abused victims of the privileged, it is truly difficult for them not to bear malice against their employers. Such resentment on the part of a servant makes it difficult, if not impossible, for the professional host to make his guest feel thoroughly at home. Only when a conscientious effort has been made with employees to eliminate this fundamental dissatisfaction is the effort of systematic education in the details of any particular job worth trying on the part of the management.

Since labor is particularly sensitive these days to an appeal to its conscientious sense, it is essential that this first phase of labor relations be handled by individuals of utter sincerity, characters of broad human understanding and sympathy, persons in whom the will to devote themselves to service is more than normally developed. Such a person must have more than a superficial understanding of human psychology. He must be capable of talking *with* those he is instructing rather than "*at* them." He must know how to be self-effacing and to share his attiudes with his disciples rather than to lecture them as a pedagogue.

Gracious service, performed with dignified reserve and competence, must start with the *head* of the management organization and must permeate the entire organization to the lowest office boy. It must filter through the superintendents, on down through the "front" help, and, when it reaches those on the "back," it must still be strong enough to infuse these men with the idea of giving a tenant everything to which he is entitled, and to give this with a minimum of unpleasantness and, more positively, with the greatest amount of agreeable satisfaction. On the other hand, it must be made clear that generosity carried beyond the limits of intelligent investment is distinctly unwise and often promotes trouble, quite aside from the fact that the landlord is in business to make money.

Personnel must constantly be schooled. It is not sufficient to provide written instructions. Constant check-up and constant drill are necessary to maintain the desired standards, for, even after a considerable period of training, men will lapse back into old traits. A time for open discussion should be set aside after classes and the men encouraged to partake. This brings up the essential point that men should be encouraged to speak their minds when in disagreement with the management on matters affecting their work. The usual procedure is the suppression of their points of view, which is definitely bad. Only through encouraging an intelligent participation in the whole program of satisfying the house guest can the personnel be expected to take pride in their jobs and to develop a sense of individual

responsibility as a significant part of a major plan. Everyone of us seeks self-expression. Suppressed, our expression becomes subversive; encouraged, it often takes the course of positive enthusiasm. This has proved to be the case in the writer's experience, where, by two primary means, the boys are encouraged to speak their minds freely: they have their own little "paper," *The Merowit Monitor* (as they have named it), which they turn out occasionally and circulate among themselves; the other means is by contests in which they express themselves in writing on provocative subjects. At first the boys were chary about expressing themselves freely. However, they soon learned that their jobs did not depend upon discretion, and their real attitudes manifested themselves. It was then possible to have a "heart-to-heart talk" with a disgruntled, "dangerous" element. Better still, it was possible to put him in touch with a more objective fellow worker whose understanding of our side of the problem was a more persuasive argument than we might ever muster. It is surprising to see the fair attitude these boys will take when once they feel a sincere interest has been taken in them. They fairly outdo themselves to show gratitude for being treated as human beings worthy of respect.

Employee Representation

This is but the beginning. The personnel in each of our houses has selected a representative who sits with us in council on matters concerning their welfare. Sometimes the questions are relatively trivial, yet the boys take the responsibility for the decision seriously and lean backward to keep our standards high. As an example, a tenant wrote in a sympathetic vein asking us to amend our rules so that the doorman and the elevatorman on duty in the entrance lobby would be at liberty to seat themselves between calls. When the boys had determined among themselves the need for our ruling against this, there was little question of failure to observe it in the future. The tenant, notified of the decision, was impressed with the consideration given the matter and no longer thought of us as martinets.

Rewarding Excellence

It goes without saying that men should be offered inducements to excel. They should be commended for exceptional service, particularly when a tenant takes the trouble to advise the office of his special satisfaction. We have provided a bulletin board in each locker room where we make a practice of posting copies of complimentary letters sent to the office. Aside from the appeal to vanity, there are more substantial inducements. For example, each month we appoint one of the men on the "front" and one on the "back" of each building as an "Officer of the Month." He is privileged to wear a distinguished insignia and receives a modest bonus during the time he wears this mark of excellence. Then, too, the man who has been consistently outstanding over a long period of time for faithful and intelligent service is rewarded by a permanent increase of salary and is privileged to wear a citation. It was interesting to observe the feeling of resentment which greeted our first attempts to reward excellence. The boys felt that it was an attempt on our part to establish a medium for espionage by playing favorites, but this impression was soon straightened out.

It may virtually be said that if the personnel of a building consistently performs its appointed tasks with enthusiasm and with ability, tenants will react favorably toward the house and overlook such drawbacks as inferior layout, deficiencies in equipment, etc. On the other hand, regardless of how splendid the accommodations, if disgruntlement is revealed by the house personnel or if for any reason there is conveyed to the tenantry a sense of dissatisfaction and bitterness in those matters over which the management has control, it universally follows that a tenant will

absorb a costly resentment against the ownership. This will manifest itself when the lease runs out and the matter of renewal comes up, particularly if the landlord seeks to raise rentals. It is bad enough for the individual landlord, for it increases his turnover, and, in the case of renewals, it runs his decorations up over what would be the case if the tenant were to reveal any sympathetic interest in his problems, but it is doubly significant where the landlord is an institution, whose business is largely dependent upon public regard. The management divisions of these institutions will find it highly profitable to devote study and effort to this specialty of personnel relations, for upon it depends to a great extent the successful operation of the properties by which their investments are secured.

Institutions at large would find it progressive, quite apart from considerations of more profitable operation of their real estate, to encourage their management departments in this work. Here is a vast opportunity lying fallow at the moment because no enterprising institution has as yet made it its business to cultivate, on a broad scale, the satisfaction of its widely distributed employees and, through them, the vast public with whom they are constantly in contact. Capturing goodwill and putting it profitably to work is a phase of public relations which is just beginning to be recognized; it is a phase which, within the next few years, will witness great strides by farsighted ownerships of large blocks of property.

* * *

Future Housing for Industry

By W. G. ROBERTS

CLARENCE DARROW is reported as saying, "I am sure of very little, and I shouldn't be surprised if those things are wrong." Perhaps he, too, has been in the real estate business at some time or other.

We, who are in the business and look back over the last few years to examine our trials and errors, wonder just what corrections can be made. We, too, are sure of very little. However, most of us are willing to confess that we cannot see very far into the future and that it does not pay to plan too far ahead. It is for this reason that I am always sorry to see an industrial building especially designed and erected for a single occupant who may need it for only a little of its life expectancy.

THE SINGLE-OCCUPANT BUILDING

In examining my own experiences and those of my competitors, I am convinced that sooner or later we shall come to look upon multi-tenant buildings, erected, owned, and maintained by people specializing in their operation, as a means of avoiding the losses which so frequently result from the vacating of single-occupant buildings by those for whom they were designed.

Loft buildings have been used by the textile and garment trades—as well as by other similar industries—for a great many years, but they were not developed to any extent for the heavier industries until about 1910. The type designed at that time for heavy industries was not improved upon to any extent until around 1929.

Space in multi-tenant buildings, designed for industry and efficiently operated, rented well throughout the depression. True, prices were lower, but such buildings suffered less in that direction than other types of industrial properties.

The New York Dock Company's four million square feet of space are almost equally divided between these two types of properties, and we know from long experience that, in spite of the exceptional commercial community advantages which we are able to offer occupants of entire buildings, such space is much more difficult to lease; also, once vacated, the buildings are apt to remain idle longer than the better types of loft space. Almost everyone with whom I have talked agrees that this is the usual experience. Yet, manufacturers are prone to build for today's requirements or for exaggerated ideas of tomorrow's requirements. They entertain the blind hope that the building which they erect today will be precisely what they need ten years hence. Such is almost never the case; no business ever stands still. When progress stops, retrogression sets in.

APARTMENT HOUSES FOR INDUSTRY

It is my opinion that the time will come when apartment houses for industry are considered with as much favor as residential apartments. They take from the shoulders of a manufacturer many bothersome burdens in the way of maintenance and operating details, which might far better be left in the hands of those whose primary business is the ownership and operation of real estate and who are equipped to attend to such detailed service and operation.

If the trends of future construction can be directed toward the multi-tenant type of building instead of the individual type, much of the distress resulting to owners of industrial real estate during depression periods can be relieved.

There may be said to be at least three major factors to be given primary consideration in connection with the construction of an industrial building for multi-tenant occupancy; the success of such a project will depend almost equally upon

the thought and care given to their development. These three factors are: the planning, the renting, and the operating. Each must be considered separately and also in relation to the others.

THE PLANNING OF "INDUSTRIAL APARTMENT HOUSES"

Before an architect sets pencil to paper, a great deal must be accomplished in order to determine just what the neighborhood needs. People with experience in renting space to industrial concerns should be consulted in order to determine the kind of space industries will buy. Out of such experience, knowledge should be obtained, not so much as to why certain deals were successful, but what caused others to fail. Analyze all of the failures available and *know* why prospects did not become purchasers. Then, there should be incorporated in the plans those things which the prospective sellers or lessors could not deliver in existing property.

Next, the potential market should be analyzed. What kind of industries are going to occupy the space? What are they going to do in it? Will they manufacture heavy commodities requiring high load sustaining construction, or is the building to be erected in a textile or garment center where unusual lighting is required? In other words, what has the community successfully produced in the past? What is it producing now? Available labor is trained along certain lines. As to those lines, it is skilled; as to others, it is not. Then, you must consider the trends as to these activities. Are they shifting to or away from the community? If they are on the increase, fine; but if not, what definite and tangible activities are in sight to replace them, and what are the probable requirements of these new activities?

You must consider the size of space units required—the average as well as the minimum and maximum sizes. In the Trade Facilities Building, for example, it was determined that the ordinary maximum would be about 30,000 square feet and the minimum about 5,000 square feet, with an occasional requirement of from 35,000 up to 60,000 square feet. The floor plans were arranged, therefore, to accommodate those requirements, and an area of 30,000 square feet was provided in an unbroken unit. All or part of another unit of the same size was made available on the same floor level to take care of those needing up to 60,000 square feet. The 30,000 square foot units can be divided so as to produce 5,000, 10,000, 15,000, 20,000, or 25,000 square foot units, all being fully accessible to the buildings service facilities, which are centrally grouped between the two wings. (See Figure I.)

However, in some communities there may be an important need for accommodations for the little fellow. In Chicago, the Midland Warehouse & Transfer Company has one building with, I think, a gross area of about 500,000 square feet which is leased almost entirely to users of very small units for carrying spot stocks by out-of-town manufacturers. Offices of varying sizes have been provided along the ends of the buildings; and, in many cases, the stockrooms are divided by heavy wire screening. You would be amazed at the variety of merchandise stocked in that building. Also, because there is a shortage of good space in small units, the rates obtained make the business very profitable to the landlord. Since this is a stockroom proposition, the merchandise turnover is usually such that rental is not an important factor to the tenant. Whether such a tenant pays $600 or $900 a year for a thousand feet of space does not seem to make much difference; what he wants is a place where he can serve his customers promptly. That attitude is, I believe, typical as to distributors of well-known commodities and one which has a serious bearing on your building plan if it is to be used, all or in part, for distribution purposes.

Now, as to the building's common facilities and equipment, it must be borne in mind that skimping will be sui-

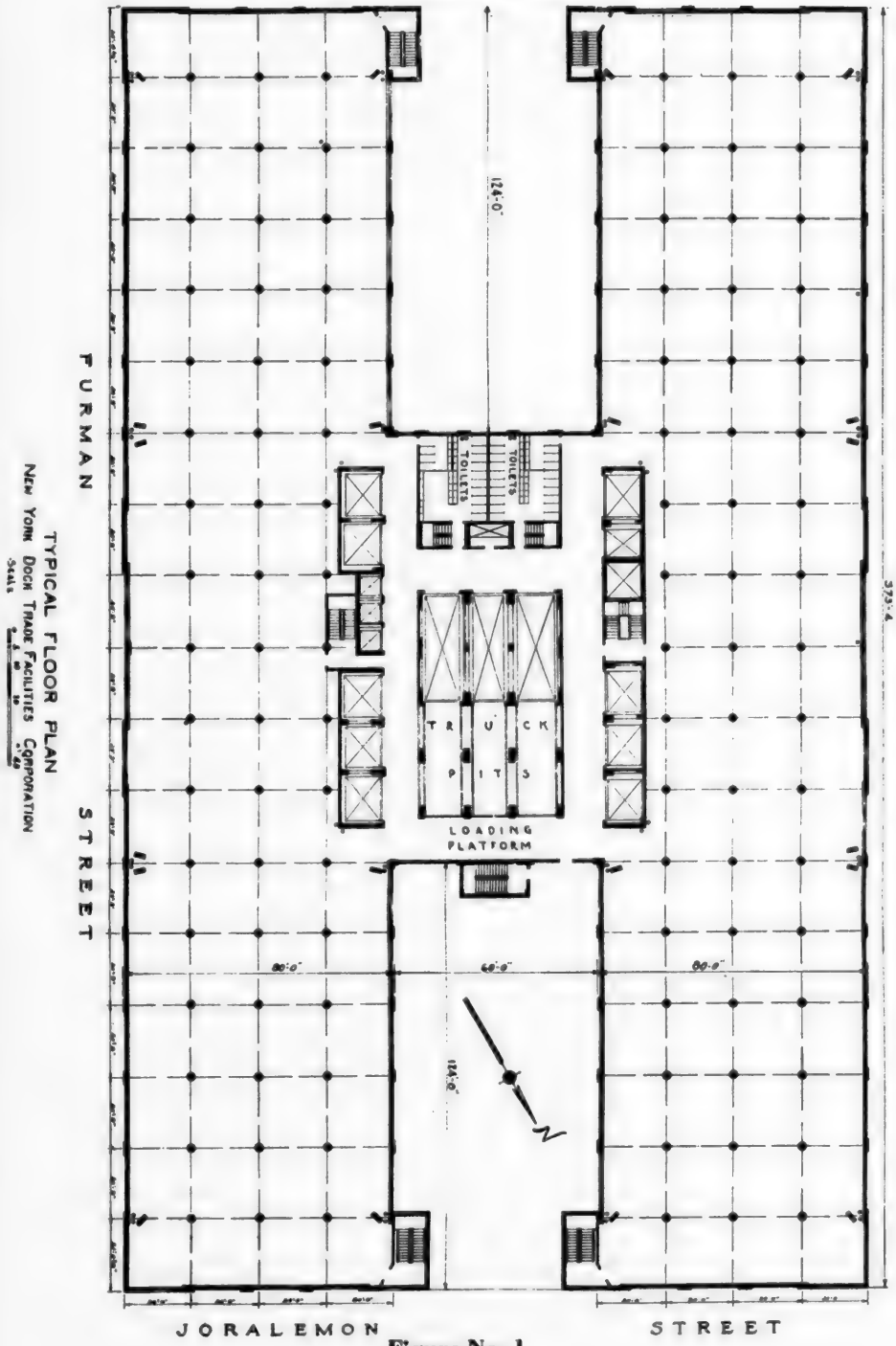

FURMAN STREET
TYPICAL FLOOR PLAN
NEW YORK DOCK TRADE FACILITIES CORPORATION
124'-0"
TOILETS
TOILETS
TRUCK PITS
LOADING PLATFORM
80'-0"
60'-0"
80'-0"
124'-0"
N
375'-4"
JORALEMON STREET

Figure No. 1

cidal. When a building of five or six stories has been erected for one occupancy and later broken up for rental by floors or parts of floors, the prospective tenants find fault with the lack of sufficient elevators. Generally, we may assume that a building occupied by several tenants will need at least twice as many elevators as one of the same size which is to be occupied by one tenant. Therefore, when your building is planned, be sure to provide enough elevators; then, go a step further and include a few extra shafts in which more cars can be installed when and if needed. Not only must there be a sufficiency of elevators, but there must be under-cover room for trucks and for assembling shipments for loading trucks. If there are to be truck elevators, they should be so arranged as to eliminate the necessity for turning. If possible, trucks should be permitted to enter at one side or end of the building and to leave at the other. This will save time, annoyance, and damage to the building structure. It should be remembered that the goodwill of a truck driver is worth cultivating. If he can get into and out of your building quickly and easily, there will be no opportunity for him to grumble when sent to the building by someone who may be a prospective customer.

With these various things fully thought out, you will be able to describe to your architect all of the features which must be incorporated in your building. You will have a picture of the finished product in your mind. You will know its approximate shape, size, and design. Utility will be the governing idea behind its construction; and, if you have been thorough in instructing the architect as to these features, he will be able to make his plumbing, drainage, lighting, and heating layouts conform to the general plan so that future divisions of space will be fitting and inexpensive.

The average architect will seek to incorporate in his plan many things which to the lay mind are not only ornamental and expensive but which will appear to have no practical value. It is my belief that his ideas along these lines should not be too strictly curtailed. I do not mean by this that your building should have a lot of gingerbread in its trim, but there is much which can be done to improve the appearance of a building which will not add greatly to its cost. If the plot will allow for it, a bit of land devoted to grass and shrubbery may yield excellent returns in the way of better rentals. An attractive lobby and well-finished passenger elevators, each in keeping with the size of the building, frequently will cause a prospect to prefer space in your building to that in a less attractive structure.

It should be remembered that every man spends a substantial part of his life at his place of business. Your manufacturer prides himself upon showing his customers and friends that he can afford space in a building of prosperous appearance. For these reasons it is penny-wise and pound-foolish to skimp on those things which add to the attractiveness of your building.

RENTING THE "INDUSTRIAL APARTMENT HOUSE"

With your building planned, you are next concerned with its rental. Now, there are many brokers who will not agree with my ideas as to the proper methods of renting industrial building space. I have only my own experience to draw upon, plus rather casual observations of the operations of others. These experiences and observations have been limited to the larger cities, and I am not prepared to say that my thoughts are applicable to all locations. I do know that they have worked in my own case because they have resulted in the renting of nearly 3,000,000 square feet to new tenants in ten or eleven years.

I am opposed to the exclusive agency in favor of one broker. My experience has been that when your door is open to all brokers upon an absolutely equal basis,

the results are far more beneficial. A broker has no particular liking for dealing through a competitor, even if the one having the agency is permitted to pay full commissions. Every broker likes to feel that he can approach the owner directly, and he can sell his prospect and himself more easily that way than through another broker. Also, there are some grounds for the suspicion that professional jealousy may exist. The prospect appreciates the advantage of more direct dealings and likes to shut out as many "third parties" as possible. He knows that the services of all of these expert advisers cost someone a substantial number of dollars and that the expense will come out of the rent he pays.

About 70 per cent of the deals I have made have originated with brokers. I think that no owner can succeed without their hearty cooperation. It is essential that an owner establish and maintain a reputation for fair and just dealings with brokers. Unless he has their confidence, it is my candid opinion that sooner or later he will fail.

Brokers know far better than I the things that cause them to prefer to deal with one owner instead of another. Some of these causes are preferential arrangements with one or two brokers; higher quotations through brokers than to direct prospects; the blunt exclusion of brokers from negotiations where very casual or ineffective direct contacts have previously been established; etc.

If an owner makes a sincere effort to work with all brokers in an honest fashion, he will be amazed by the reciprocity that results. There are many leading brokers in New York who tell me of every inquiry they get from a tenant of ours. The first impression produced by such action is that it is a very foolish thing to do, but when the broker and owner are "on the level" with each other, it is a very proper thing to do. If I think the tenant is going to move, I say so and let the broker go ahead with my best wishes; but if I think he is looking only for information with which to beat down my price, and the broker knows that, he may save valuable time.

So much for new business through brokers. There are several other sources open to an owner; but, excluding the exceptional building, I do not think much of any of them—and I have tried them all. I have worn out more shoe leather than any man I know in direct solicitation, but the only tangible result has been the dull passing of time. If an owner has properties in every section of town and of every type of construction, that kind of work might bear fruit, for the odds would not be so heavily against him.

I have tried and still use newspapers. Nothing ever came of the display advertisement designed to attract the attention of a casual reader. Deals do result from classified advertisements aimed at the man who is looking for space. It is an inexpensive way of throwing pebbles at the side of a house, and quite a few may stick. In our case, direct mail, directed to a carefully selected list and followed up through an orderly and regular program extending over a year's time, did not pay the freight. I still have confidence in that method of advertising if adequately carried out, but few have the patience and perseverance to keep it up consistently in the face of unsatisfactory results.

We have gone far afield with what we thought were carefully planned campaigns. Our best talking point is our exceptional railroad and water shipping facilities, so we have gone to towns beyond the normal trucking range, listed likely prospects, bombarded them with advertising material, and then called on them to gather in the harvest, but there must have been a drought because the crop was pretty light.

I have at last come to the conclusion that while far fields look greenest, they are merely optical illusions; one's best field of operations is his own front yard. Not that we do not have tenants who

have originated in other cities—there have been plenty of them; but they are people who have first determined, of their own accord, that they wanted to move to or establish a branch in our city.

The last source mentioned here is by no means of the least importance; it is the man who comes to you because of the recommendations of a customer you already have. If you have something worth while, your new business from this source will be cumulative and particularly gratifying.

OPERATING THE "INDUSTRIAL APARTMENT HOUSE"

Before your tenants start moving in, you must have selected your operating staff. It is an element which if *improperly* executed will, in my opinion, defeat the whole purpose. When a building has been constructed, its space is rented under lease contracts which detail the obligations of the landlord and the tenant each to the other. From time to time during the term of the lease, problems affecting both the landlord and the tenant and never anticipated in the original negotiations will raise their ugly heads. The tenant's business may change completely; it may be necessary to abandon one line of endeavor and to take up something entirely different. When that time arrives, things must be done to his plant. He may require more space or less space; it may be necessary, in order to keep him in business, that his rent be reduced. Even though no tenant will ever give a landlord a chance to increase the rent as stipulated in the contract, there may be many times when the landlord will find it to his own advantage to reduce the rent or to forego collection of a part in order to keep a good customer in business.

Preservation of a tenant you have is comparable to the proverb about "a bird in the hand." Beyond these things, the owner must be prepared to give advice and information to his tenants about a vast variety of things which do not actually pertain to a landlord's business. He must not only provide service more than sufficient to carry out his obligation and do those things which his tenant expected him to do when he entered his building, but he must have trained experts and engineers who can help the tenant solve his problems involving electrical and steam installations, etc. He may even find it necessary to go into a tenant's plant and tell him how he can completely rearrange it in order to accomplish greater efficiency. If the building is not large enough to warrant the salaries of men specialized in these particular fields, he may be able to find all of them embodied in one good man. Your renting agent and your bill collector will have fewer contacts with your customers than will your building superintendent and his assistants. It is they upon whom you must depend for the maintenance of the goodwill of your tenants—without which you cannot survive. They should know their duties and how to perform them; they should know how to say "no" politely but firmly when there is need to do so. What your building superintendent tells your prospective customer and the way he tells it will be given more careful consideration than will the words of your salesman or your expert broker. He represents a type with which a manufacturer is more familiar, and his forthright answers to embarrassing questions may conclude a deal when an evasion might completely ruin it.

FINANCE AND TAXATION

Aside from the questions of design, rent, and operation, there are two other important points in connection with the construction of this type of building which, while not considered in detail here, will perhaps control decisions as to whether such buildings are or are not to be erected. They are the matters of finance and taxation. Almost every annual report of a life insurance company issued within the last year has stressed the absence of opportunities to invest surplus

funds at reasonable rates of return. Yet insurance companies are very reluctant to advance mortgage money to finance industrial real estate projects. This reluctance is based upon unfortunate experiences which have arisen out of bad investments in properties owned and occupied by industries. Their mortgage committees need to be educated to the fact that a multi-tenant building in no way resembles a single-occupant building so far as mortgage possibilities are concerned. A building owned by its occupant is at its highest value only so long as the business of the occupant for whom the building was specially constructed continues to prosper. The multi-tenant type building, adaptable to a variety of needs and capable of being leased in large or small units, is in practically the same class as an apartment house and may be deemed likely to enjoy at least equal success for an even longer life.

As to taxation, any enterprise of the type under discussion is a valuable asset to the community in which it is located for the reason that it will not only help to retain such industries as are now a part of the community but will attract others. Such a building is a source of pride to a community. It indicates progress and prosperity.

For these and other reasons, industrial property of all types is entitled to special consideration by taxing authorities. Chambers of commerce and other civic organizations interested in the growth and industrial success of their communities have recognized this fact by subsidies and grants-in-aid of such projects.

* * *

Farm Loans in the Future

By C. U. JETT

TO discuss farm loans in the future, one must enter the field of prophecy, and that is always more or less hazardous. It is not the purpose of this discussion to enter that field in the sense of crystal gazing, reading tea leaves, or watching the ouija board, but it is hoped that observations of farm loans in the past will give us some information about farm loans in the future. The word "observations" is used advisedly, as a study which would make possible anything approaching an analysis of past farm loan experience would require much more space than is allotted to this article.

If farm loans in the past have been made upon a basis which proved to be satisfactory to the lender and the borrower, farm loans in the future will probably be made about as they have been made in the past. If past experience has not been satisfactory to the lender and/or the borrower, it is safe to assume that at least an effort will be made to remove, as far as possible, some of the causes of that unsatisfactory experience.

The following are a few facts and figures on past experience:

The total debt on farm lands and buildings at the beginning of 1935 was $7,645,091,000. This represented a decline of 17 per cent from the total of $9,214,278,000 five years earlier.[1] In 1910 it was $3,320,470,000; in 1920, $7,857,700,000; in 1925, $9,360,620,000; and in 1928, $9,468,526,000.[2]

The actual number of mortgaged farms at the beginning of 1935 was 2,350,313 which was 6.9 per cent below the number of 2,523,223 for 1930. Of all farms, 34.5 per cent were mortgaged in 1935 and 40.1 per cent were mortgaged in 1930.

MORTGAGE HOLDINGS OF PRINCIPAL LENDING AGENCIES

From the chart (Figure No. I), taken from Technical Bulletin No. 521, United States Department of Agriculture, the trend and volume of farm mortgage holdings of principal lending agencies may be observed. It will be noted that life insurance companies increased their holdings from 1914 to about 1927, after which there was a gradual decline to about 1932; from 1932 there was a rapid decline.

The Federal Land Bank began operation in 1917. From that time to about 1929 there was a gradual increase in the volume of loans held by that institution. From 1929 to 1932 there was a slight decline, the volume of new loans continuing to decline through 1934. Since the beginning of the mortgage refinancing of the Farm Credit Administration in 1933, there has been a substantial reduction in the volume of farm mortgages held by all other important lending agencies and a substantial increase in the volume held by the Federal Land Bank and Land Bank Commissioner.

TABLE No. I

Percentage of the Total Farm Mortgage Debt Held by Various Lending Agencies, 1928 and 1935[3]

	Percentage of Total Held	
	Jan. 1, 1928	Jan. 1, 1935*
Life Insurance Companies	22.9	16.3
Federal Land Banks	12.1	32.7
Land Bank Commissioner	—	
Commercial and Savings Banks	10.8	9.0
Mortgage Companies	10.4	3.4
Joint Stock Land Banks	7.0	3.4
Individuals	29.6	24.6
Others	7.2	10.6
TOTAL	100.0	100.0

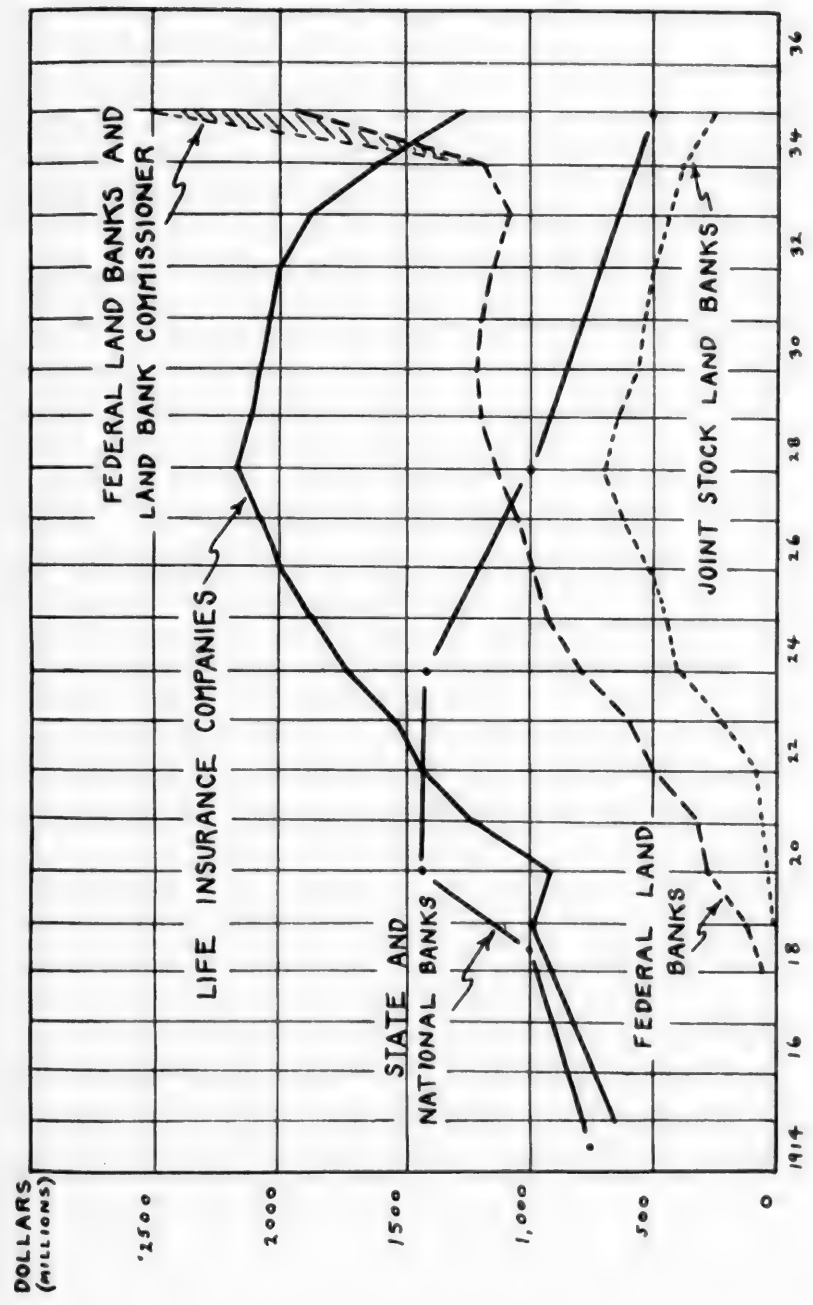
*Preliminary

In 1928 life insurance companies held 22.9 per cent of the total farm mortgage debt in the United States. In 1935 they held 16.3 per cent. In 1928 the Federal Land Banks held 12.1 per cent and in 1935

[1] U. S. 48—Cooperative Survey—U. S. Department of Commerce Bureau of Census and U. S. Department of Agriculture Bureau of Agricultural Economics—Farm Mortgage Indebtedness in the United States.

[2] U. S. Department of Agriculture—Separate from yearbook 1935, No. 1485.

[3] "The Agricultural Situation," August 1, 1937.



TREND OF FARM-MORTGAGE HOLDINGS OF PRINCIPAL LENDING AGENCIES

1914-34
Figure No. 1

the Federal Land Banks and the Land Bank Commissioner held 32.7 per cent. The United States Department of Agriculture estimates that by the end of 1937 the Federal agencies will hold 40 per cent of the total farm mortgage debt.

Information on farm mortgage foreclosures has not been summarized as it has for farm mortgages; however, the following will give you some conception of the extent of foreclosures during the last few years:

> In 1932, 28.4 farms per 1,000 of all farms in the United States changed ownership by foreclosure, bankruptcy, default of contract, sale to avoid foreclosure, and transfer of title or other transfers to avoid foreclosures; in 1933 there were 38.8 farms per 1,000 of all farms; in 1934 there were 28; in 1935 there were 21; in 1936, 20.3.[4]

According to a recent survey by the Iowa State College of Agriculture and Mechanic Arts, corporations on January 1, 1937, owned 11.2 per cent of the farm land in the state, or 3,813,000 acres, which is equivalent to approximately 23,800 individual 160-acre farms.[5]

The Federal Land Bank, at the end of 1935, owned outright and held subject to redemption 27,516 farms, and the Joint Stock Land Banks owned 11,547 farms. The United States Department of Agriculture estimates that on January 1, 1933, the market value of farm real estate owned by corporations was $770,000,000.

It would be impossible to determine the amount of losses which investors in farm mortgages have sustained up to this time, as many mortgages, badly delinquent, are still being carried in some regions on which adjustments, no doubt, will have to be made in the future. Furthermore, all of the real estate which lenders acquired by foreclosure has not been liquidated. A great deal of the real estate which has been sold was sold on rather liberal terms with small down payments. If the prices of agricultural commodities remain high for several years, further losses may be comparatively small. However, the fact that losses were substantial during the depression years is shown by the following figures:

> From May 1, 1933, through December 31, 1934, the Federal Land Banks and Land Bank Commissioner made 123,000 loans to borrowers, who, by refinancing their loans and unsecured debts, were able to obtain a reduction of 30 per cent of the prior debts.
>
> From October 1, 1933, through March, 1936, 125,861 applications were made to the debt-adjustment committees for adjustments; 67,020 cases were adjusted, and the average reduction was 26 per cent.[6]

These last figures duplicate in some cases the figures given above.

From the foregoing facts, which briefly indicate what our past farm mortgage experience has been, two conclusions pertinent to this observation may be drawn:

> The first is that the Federal Land Bank has become the dominant influence in the farm loan field. The Federal Land Bank is a semi-governmental agency and as such is subject to the Acts of Congress. Since it is not beyond the realm of imagination to think that the Acts of Congress might be influenced by what, at the time, would appear to be good politics, it is difficult, if not impossible, to predict the future influence of the Federal Land Bank.
>
> The second is that the farm mortgage experience of the past has not proved satisfactory to the lender nor the borrower.

As a result of this unsatisfactory experience, a great deal of study has been given to farm loan practices in the past in an effort to find some of the weaknesses of those practices. These studies have brought to our attention what now appear to be very definite weaknesses in those practices.

FARM APPRAISALS

The first and perhaps the most outstanding weakness is found in the appraisal methods used in the past. Appraisals were usually based upon current sales values. An appraisal of an individual farm consisted of comparing that farm

[4]Circular No. 417, U. S. Department of Agriculture.

[5]Bulletin No. 362, Iowa State College of Agriculture and Mechanic Arts.

[6]U. S. Department of Commerce, Long Term Debts in the United States, Domestic Commerce Series No. 96.

with similar farms or other farms that had been sold in the past and estimating what that particular farm should sell for under conditions which were assumed perhaps to be more ideal than real. Furthermore, under the old system, by which local correspondents created the loan business, made their own appraisals, and handled all of the details in making loans, the one making the appraisal often had a financial interest, in the way of a commission, in the closing of that loan. Regardless of how honest one is, it is often difficult to adequately and impartially appraise his own creation. But even where that element was removed, there was but little information on the theory and practice of rural appraising available. An official of a large eastern life insurance company remarked a few years ago that life insurance companies had made farm loans for seventy-five years without ever developing a definite system of rural appraising.

Recognizing the inadequacy of appraisal methods used in the past, the National Joint Committee on Rural Credits appointed a subcommittee on Appraisal Procedure which held its first meeting in November, 1933. This committee worked untiringly for many months to develop a sound appraisal system, and out of it a system has developed which appears to represent the most advanced thought on rural appraising. This committee defined rural appraising as "a definite, written, detailed opinion of a qualified individual or group of individuals of the Basic Value of a rural property." "Basic Value" was then defined as, "The worth of a property derived from such economic elements as earnings, location, and home use."

In this definition, earnings were placed first. From a farm loan standpoint, earnings are of first importance, although earnings alone do not make up the total value of a rural property.

Another feature of this system is that it is *a written, detailed opinion.* That leaves the appraisal in the realm of opinion. However, since it is written and detailed, when that appraisal reaches the desk of the lender, he can see the reasons for the opinion and make such changes as he thinks should be made and, therefore, change the appraised value accordingly.

Under this system, by which the earning value is established, typical yields and long-time or "normal" prices are used. Unfortunately, most borrowers do not have actual records of yields for more than a short period. As far as possible, the actual yields of the various crops produced on the farm which is being appraised are determined, and these yields are compared with the county average. The actual yields may be above the typical yields for that particular farm due to a superior type of farmer, or they may be below the typical yields due to an inferior type of farmer. Care, therefore, must be taken not to reflect too much the management of the borrower at the time the appraisal is made.

After the earning value of a particular farm has been established, other adjustments for location and home use are made. Here again the appraisal enters the realm of opinion and judgment. It is apparent, therefore, that the rural appraiser today carries a heavy responsibility.

No doubt the last question concerning rural appraising has not been answered; the present appraisal system, which is now being tried out and which appears to be the most satisfactory system so far developed, will gradually undergo certain refinements and modifications. It is believed, however, that very definite and sound progress is being made in developing a sound rural appraisal system.

Loan Policies

Basic and fundamental as the appraisal is in making sound loans, it is doubtful if all of the farm loan problems can be solved in terms of the appraisal. If not equally important, certainly next in importance, is what might be termed loan policies. By that is meant the term of the

loan, repayment plans, per cent of loan to appraised value, the service or supervision of loans, and programs for different types of farming regions.

The United States Department of Agriculture has estimated that the average mortgaged farm will remain in debt about thirty-five years, varying from twenty-three years to fifty years. It has also estimated that of all loans reported by lending agencies for 1924, 17.5 per cent of the outstanding loans had a term of one year; 11.7 per cent, two to four years; 46.5 per cent, five years; 9.6 per cent, ten years; and 13.2 per cent, more than thirty years. Mortgage companies had 75 per cent of their loans on five-year terms and insurance companies 65 per cent. Commercial banks had 52 per cent of their farm mortgage loans on terms of one year. The average term of loans for insurance companies was 5.6 years.[7]

Under the typical five-year loan, the average borrower was required to go through the process of securing a loan seven times before the loan was paid off. That, of course, was an expensive loan plan for the borrower. It is interesting to note in connection with the length of the terms of farm mortgages in the past that the term of the standard amortized loans made by the Federal Land Bank, whereby payments of about 1 per cent of the principal are made each year, is about thirty-three or thirty-four years. No doubt, one of the reasons why loans have been made for such short terms in the past is that when interest rates are low, the lender does not want his funds tied up too long. He hopes that, at the end of the short term, interest rates will be higher. Also, when interest rates are high, the borrower wants a short-term loan in the hope of being able to refinance at a lower rate of interest at the end of that term. The general trend now appears to be in the direction of long-term loans which more nearly approach the term for which mortgages are expected to exist.

One of the many unsolved problems in attempting to make farm loans upon a sound basis is that of repayment plans. Up to the time the Federal Land Bank began operation, loans were usually made upon a short-term unamortized basis. The Federal Land Bank sponsored long-term amortized loans. The amortization was upon one of the following bases:

1. Fixed installment payments including principal and interest. This plan appears to have been an improvement over the short-term unamortized loan, but it does not solve the problem of the varying income due to changes in the price of farm commodities or crop failures.
2. The so-called "Springfield" plan of amortization under which the borrower pays fixed installments on the principal throughout the life of the loan. Under this plan, the interest payments and, consequently, the total payments each year are reduced. The fact that the Federal Land Bank found it necessary, or at least advisable, to postpone all principal payments in 1933 indicates that neither of these plans is adapted to the varying farm income. However, it appears that the "Springfield" plan could be rather easily adapted to the varying income by permitting the borrower to repay principal during years of high income and reducing or postponing principal payments during years of low income, each, of course, within certain limits.

Some of the plans which have been suggested for varying principal payments are as follows:

1. According to the level of farm prices.
2. According to the gross income.
3. According to the net income.
4. According to the price of a given commodity.
5. The crop share mortgage by which borrowers would pay the equivalent of a rental share during periods of low prices.

Obviously, there are certain objections to each of the above plans. Under the first, one objection is that the level of all farm prices does not adequately reflect the level of prices for the various types of farming regions. Furthermore, the question of how much the principal payments should be varied with a given change in the price

[7]Technical Bulletin No. 288, pp. 76-77, U. S. Department of Agriculture.

level would have to be carefully worked out.

The objection to the second plan is that the gross income does not accurately reflect the borrower's ability to pay, as the cost of production may be high in relation to gross income at one time and low at another.

To vary the principal payments according to net income, the third plan has certain complications, in that it would be necessary to determine in advance just how the net income was to be determined, and it would be necessary for both the lender and the borrower to fully understand just how this was to be done.

To vary the principal payments according to the price of a given commodity, the fourth plan would, of course, require many different types of payments to make the plan adaptable to the various types of farming regions. Until the different types of farming regions are definitely and clearly defined, it would be difficult, of course, to determine just where the line would be between one type of farming region and another. This plan, naturally, has rather definite administrative objections.

The crop share mortgage might be practicable during years of low prices, but it has the administrative objection that it would be necessary to keep an accurate check on each farm, which, of course, is rather expensive.

It is apparent, therefore, that as desirable as the variable plan of repayment may appear to be from an academic or theoretical standpoint, there are certain problems in connection with the plans so far suggested which have not been satisfactorily worked out. This whole problem of mortgage repayment is one which requires considerable additional study. Before much progress is made, it will probably be necessary to do a certain amount of experimenting with various plans. That, of course, requires courage. It often takes courage to depart from long established practices, but there is one hopeful sign in that at least one life insurance company has had the courage to try out the plan of varying principal payments in one region according to the price of one commodity. Just how attractive that plan will prove to be to the borrower and how satisfactory it will be to the lender are yet to be determined.

Provision has also recently been made, I understand, by which Federal Land Bank borrowers are permitted to prepay principal. Under this plan, the borrower may prepay principal during years of good income and forego principal payments during years of low income, so long as the total of his principal payments equals or exceeds the amount currently due. It is hoped that some of the other plans which have been suggested will be given a fair trial before they are discarded as worthless or that some new plan which would appear to be more desirable will be worked out. It is believed that some plan should be worked out by which borrowers are permitted or required to make principal payments more nearly according to their ability to pay, within certain limits.

The per cent of loan to the appraised value which life insurance companies are permitted to make is determined by the laws under which they operate. The type of appraisals which insurance companies use and their interpretation of these laws give them a rather wide range in which to make loans. The usual practice in the past has been to make loans up to about 50 per cent of the value of the land, which may include none, little, or much of the value of the buildings, depending largely upon how the appraisal was made. The per cent of the loan to the appraised value should depend upon the type of appraisal which is used. Furthermore, the per cent of the loan to the appraised value which might be safe in one type of farming region might not be safe in another region. Instead of adopting a policy of making loans up to a certain per cent of the appraised value of the security for all

types of farming regions, a more desirable method would be to adapt the per cent of the loan to the appraised value to the type of soil and type of farming region.

SERVICE OR SUPERVISION OF FARM LOANS

The question of service or supervision of farm loans is one which is being very much discussed at this time. It is believed that by proper supervision loans which might otherwise go into the "trouble" class might be kept in good standing. Often a few hours spent with a borrower once or twice a year going over his farm program with him, analyzing his farming operations from a farm management standpoint, and suggesting certain changes in his farming methods might mean the difference between profit and loss on the year's operations. This, of course, could be done only by men of good practical and technical training in agriculture and who have the ability to secure the borrower's confidence and cooperation. Such supervision is expensive but might be less expensive than acquiring a large amount of real estate which must be supervised. Furthermore, there is the danger of getting to the point where the lender is, in effect, operating the borrower's farm. Just how far lenders are justified in going or attempting to go in supervising farm loans is somewhat questionable, but it is believed that lenders should maintain a closer contact with the borrowers in the future than they have in the past.

VALUE AS RELATED TO TYPE OF FARM AND LOCATION

Farm loan experience studies show that foreclosures have been more or less territorial; that is, foreclosures have been more numerous in certain areas and on certain types of farms than they have in others. One reason given for such foreclosures is that there has been a tendency to overvalue poor land. Hill, in "An Analysis of the Loaning Operations of the Federal Land Bank of Springfield,"[8] says:

> "In general, the largest percentage of foreclosures and heaviest net loss on foreclosed farms occurred among loans made on farms of relatively low agricultural value. . . . "

Johnson, in "Farm Loan Foreclosures in Minnesota,"[9] says:

> "From the standpoint of the state as a whole, foreclosures have been relatively greater on lands of low value that included northwestern and northeastern districts of Minnesota."

Mereness, in "Farm Mortgage Loan Experience in Southeast Alabama,"[10] says:

> "In general, foreclosures and losses increase as appraised value per acre decreases. The relation of loan per acre to value per acre was practically the same on all soil types, the loan being slightly more than one-third of the value. These results indicate that the poorest soil types were overvalued in relation to the better types."

Murray and Bitting, in "Corporate-Owned Land in Iowa, 1937,"[11] say:

> "Areas of high land value are, in the main, areas with small percentage of corporate-owned land. Land of low value, on the other hand, appears to be owned more frequently by corporations."

They add:

> "Other things being equal, this suggests that lending agencies did not differentiate properly between high and low value land."

They add further:

> "On the other hand, in areas of uneven topography with a high percentage of untillable pasture, the value of land is recognized with little difficulty. In such areas the less productive land has not been overvalued."

They finally conclude:

> "Evidently there is a twilight zone between the level fertile acres and the hilly permanent pasture. This twilight zone is an area bordering on one of high land values where it is

[8] Bulletin No. 549, Cornell University Agricultural Experimental Station.

[9] Bulletin No. 293, University of Minnesota Agricultural Experimental Station.

[10] Bulletin No. 242, Agricultural Experimental Station of the Alabama Polytechnic Institute.

[11] Bulletin No. 362, Iowa State College of Agriculture and Mechanic Arts.

difficult to distinguish between soil of high and low productive capacity."

The general conclusion drawn in each of the above studies referred to is that foreclosures were more numerous in areas of low value land because of the tendency to overvalue the less productive land. These conclusions appear to be well founded, but would it not be equally logical to conclude that foreclosures were more numerous in these areas because of the failure to adapt loan policies to types of soil and types of farming areas? If there has been a tendency to value all lands too much on a common average, might it also not be true that loan policies have been too general and not specific enough for types of soil and farming areas? If one farm with an appraised value of, for example, $150 an acre carried a $75 an acre loan without going into foreclosure and another farm with an appraised value of $80 an acre carried a $40 an acre loan and went into foreclosure, are we to conclude that the $150 an acre farm was correctly appraised and that the $80 an acre farm was not correctly appraised? Might we not just as logically conclude that not all types of farms will carry the same percentage of loan to appraised value? Are we justified in concluding that all foreclosures in the past were due to faulty appraisals and that loan policies had no bearing on foreclosures? It will be observed that these statements are made in the form of questions rather than assertions or conclusions. It is hoped that future studies and research will give more information on this subject.

The Future Farm Loan Policy

To draw the conclusion that farm loan experience on the whole has been unsatistory would be erroneous. Officials of life insurance companies will tell you that they have made farm loans for twenty, twenty-five, or thirty years without a single foreclosure or with practically no foreclosures. That, of course, was during the period of rising prices which began just before the beginning of this century. During that period, the rate of interest was high enough, on the whole, to be attractive to lenders, and, with farm lands increasing in value each year, the borrowers felt justified in paying the rather high rate of interest. Interest collections were made without any difficulty. Any errors in appraisal methods and loan policies were offset by an increase in land prices before the loans matured.

During this period, both lenders and borrowers became optimistic about the future of land prices. It was argued that with an increasing population and the fact that about all of the free lands of the west had been taken up, the price of farm lands could not go down.

After the decline in prices, which began in 1920, and particularly after the decline which began in the latter part of 1929, there was still almost the same unanimous opinion about the future of land prices, that opinion being that land prices would never be high again. Loss of the export market and other equally sound arguments were used to prove that farmers would never again enjoy conditions equal to those of prewar years. Some lenders, particularly life insurance companies, ceased making farm loans altogether, and others became rather inactive. It was felt that farm loans were a poor investment. Some loans did prove to be a poor investment, but other loans which appeared to be poor investments in 1933 proved to be among the best investments carried in the investors' portfolios. With the increase in the value of farm lands, due to the rise in the price of farm commodities, many life insurance companies and other investors who had withdrawn from the farm loan field are now back in the field competing for loans.

In going back into the farm loan field, however, insurance companies are attempting to re-enter upon a basis which will preclude such wholesale foreclosures as were experienced during the recent depression years. Farm loans in the fu-

ture, it is believed, will be made upon a much sounder basis. This will be done, in fact it is being done, by adopting sounder and more adequate appraisal methods and sounder loan policies; giving attention to such factors as the term of the loan, per cent of loan to appraised value, repayment plans, etc.; adapting loan programs to types of soil and farming areas; and maintaining closer contact with borrowers. It is believed that sound progress is being made along these lines, even though at times that progress appears to be rather slow.

Future progress will be made just to the extent that sound information is made available to both lenders and borrowers and to the extent that this information is used. If borrowers are content simply to shop around a bit and accept what appears to be the most favorable loan for the moment without giving due consideration to the long-time aspects of the indebtedness, and if lenders are content to exact all that "traffic will bear" without giving full consideration to the long-time aspects of the investment, little sound progress will be made. In that event, we shall probably be headed toward trouble again if and when the next major decline in prices occurs. It is hoped, however, that both lenders and borrowers will not forget the recent unpleasant experience and will make a conscientious and intelligent effort to avoid, as far as possible, the recurrence of such experience in the future.

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Neighborhood Analysis

By WALLACE W. TRUE

IN discussing neighborhood analysis and its connection with the valuation of real property, my remarks are colored by a bias towards the mortgage man's viewpoint. I am not an active real estate practitioner, although, as you know, we, in the large life insurance companies, are involuntarily in the real estate business. It is often extremely difficult in our work to have to adopt the viewpoint of the real estate man with respect to the sale value of some of our holdings and in the next breath to consider almost an identical property from the standpoint of mortgage security.

USE AND UTILITY OF NEIGHBORHOODS

I believe that in any residential neighborhood analysis one should first consider the neighborhood or section under analysis and classify it in accordance with its use and utility—past, present, and future.

In general, it may be said that neighborhood analysis in the valuation of real property comes back to some of the fundamentals of land economics and their practical application to valuation procedure. When we speak of land economics, we mean, of course, an inquiry into the fundamentals of the theory of land value, that is, a full inquiry into the causes, necessities, and effects of the creation and maintenance of this value.

One who owns land or wealth in any form possesses certain rights, which are simply rights to enjoy the benefits of the wealth owned. Since past benefits have expired, property may be said to consist only of the rights to future benefits. Such benefits may be intangible as well as tangible in form. They may be in forms other than the mere receipt of money or money value. But, whatever the form, the value of the rights to their ownership is the present or discounted worth of all the future benefits which may be expected to flow from their possession. The determination of this value is, of course, the problem of the appraiser in any valuation procedure.

The conflicting cross currents of economic and social forces which affect the earning power of real estate today are so complex that valuations which do not consider all phases of the problem are dangerous. In measuring the size of the loan a property should be permitted to carry, errors in judgment are too costly to risk dependence on half-truths or a vague and incomplete understanding of fundamental factors; the improvement it will support, the rental it will bring, the worth of a lease covering it at any instant of time, etc., in the long run, determine real estate values.

THE STRUCTURE OF CITIES

A detached study of the pattern of any large American city will disclose a number of interesting and highly important facts to the student of land economics. At or near the transportation center will be found the central business district. Touching this district on one or more sides will be found a wholesale and capital goods sales district. At one or more outlying points, almost always at transportation junction points, will be found satellite business centers surrounded by residential areas of various types. Other outlying sections, particularly along railways, will be dotted with industrial plants. Throughout the entire city will be found a considerable number of vacant lots. Beyond the city limits the residential suburbs will be found, many of them with their own business centers. Surrounding the city itself and the suburbs, there will be large areas of subdivided land, almost entirely vacant. Extending for considerable distances beyond the borders of the central business district will be a more or less nondescript

section of old residences, flats, rooming houses, vacant lots, tumble-down buildings, and slum tenements, with here and there a warehouse, a light manufacturing or loft building, a factory, or a third-rate hotel. These various sections and districts merge into one another, and it is almost impossible sometimes to tell where one stops and the other begins. However, in a broad way, the whole can be divided, for purposes of analysis, into districts which fall naturally into six use classifications, each with its own history and its own future. These six are:

1. The central business district, with its adjacent wholesale district.
2. The satellite business centers.
3. The residential areas.
4. The industrial districts.
5. The undeveloped territory, which is of two types—the leftover lots and tracts in districts where development has ceased and the areas which development has not reached.
6. The blighted areas or slums.

CYCLE OF CHANGES WITHIN CITIES

To understand clearly the economic forces which affect land values and which make analysis of these forces so important, it is necessary to study and understand the cycle of changes which generally takes place in the various types of districts. Therefore, it is necessary to trace the development of a typical city as it affects these districts and to gauge the future by a projection of past and current trends. In the establishment of such a gauge, it is advisable to rid the mind of two somewhat common fallacies:

1. That the situation at any moment, with respect to a particular tract or parcel of land, is static.
2. That unexpected and revolutionary changes in building design, transportation, or the habits of the people will set at naught overnight the most carefully worked-out prediction of future events.

There is an abundance of historical evidence to show that changes are always gradual and not instantaneous. Whatever may be the case in other fields of human endeavor, changes in the type and rate of land utilization come slowly and can usually be foreseen and gauged with a considerable degree of accuracy.

The fundamental causes which bring a city into existence are a combination of factors, usually a strategic location or a natural resource, plus the energy and vision of the pioneer community leaders. The development is usually bilateral: commercial and manufacturing. The original pattern of the town usually consisted of a small, sprawled-out business district closely surrounded by a relatively dense residential section, with here and there a mill, a factory, or a mine. With the growth of a village into a town and later into a city, certain inevitable changes take place. In many instances this growth is accompanied by a creeping of the business center to a new location. This movement, however, is generally very small and of little moment to the community as a whole.

With growth, there begins an encroachment of both business and industry on the original residential section. This starts an outward or extending movement which may be relied upon to continue while the growth of the city lasts. Those men who are financially able to do so move further out into newer homes located in better surroundings. The old houses are occupied by the poorer elements in the population who are not able to afford the newer and more desirable locations. Newcomers possessed of sufficient means join the exodus to the newer sections and assist in creating, first, speculative and then stable land values in these sections. With the continuation of this movement over extended periods of time, demands for transportation come into being. There results, first, the use of the private automobile; second, the development of bus lines or streetcar systems; and, lastly, rapid transit, elevated, or subways and steam railroad commuter service.

The demand for land for city purposes is at any one time usually rather highly localized in only a few districts, with a

reasonably steady demand in the central business district, which, periodically during the period of growth, undergoes a process of more or less complete rebuilding as higher and higher land values are created through increases in the population concentration.

From the standpoint of value, as well as in some other respects, the central business district is generally of outstanding importance. The typical American city has but one central business district. New York City is unique in having two, and Los Angeles may soon have two also. This center completely overshadows the largest of the satellites. In metropolitan Chicago, for example, approximately one-eighth of the total value of all real property is in the central business district.

While these highly localized activities are going on, another economic force is at work. Due to the creation of high land values by reason of proximity to the central business district, to transportation, or to a satellite center, or for some other cause, land becomes too valuable for its original use, and supersession or transition sets in. Some examples are: farm land to suburban residential, single-family sections to multiple-family apartments, and the demolition of low buildings in the central business district and the erection of skyscrapers.

Development of Satellite Districts

Next in importance, from the standpoint of high value, are the various satellite business centers. While the values in these centers are high, the areas involved are usually very small. The reason for this is seen in the small amount of land needed to contain all of the commercial structures of a small community.

The formation of the satellite business centers and the changes which occur follow generally, in miniature, the movements which take place with respect to the central business district. At first they are no more than neighborhood business centers. However, with the increasing inadequacy of modern transportation systems, the spreading out of the urban mass, and the increasing failure to maintain comfortable and convenient service between these outthrusting residential areas and the central business districts, the tendency in these satellite business centers in recent years has been to the development of a more complete pattern of their own. Today we find in the outlying sections of New York, Chicago, Los Angeles, Detroit, and other cities all of those types of facilities and commercial enterprises once regarded as solely the function and use of the central business district. This decentralization is slowly but surely sapping the values of the central business district land in almost every large city. Apparently, this decentralization is occurring in every use classification, including office space. In my opinion, it can be counteracted only by major, if not revolutionary, changes in our intra-urban transportation systems.

While, so far as I know, it has never been clearly shown by competent analysis or research, it appears that the satellite centers follow much the same cycle of changes as occurs in the central business district. In the early stages there is the same spreading, accompanied usually by a slow movement of the center, with a later cessation of this movement, a tendency to compact about a fixed point, and, ultimately, the decay of this business section or district caused by the decay of its supporting residential area.

The demand for new facilities in outlying sections ceases just as soon as the supporting and surrounding residential areas cease to grow. A detailed study of these business concentrations in small areas is useful in any problem involving property in the center. If the horizontal expansion and the creeping of the center have not yet ceased and the property in question is in the path of development, sharp increases in value may be expected. On the other hand, if creeping and expansion have ceased or if the property is on

the wrong side of the movement, mere proximity will not cause a rise in values. Many such properties are worth less than properties available for residential use farther away. In other words, these outlying centers can have their little rings of blighted territory in the same way as the central business district.

CLASSIFICATION OF THE SECTION

The changes which occur in residential districts are fairly well determined and could, with reasonable analysis, be charted with a fair degree of accuracy.

The first step should be the classification of the neighborhood or section under analysis into one of the following groups:

1. $ 3,000 to $ 5,000 building cost
2. 5,000 to 7,500 building cost
3. 7,500 to 10,000 building cost
4. 10,000 to 15,000 building cost
5. 15,000 to 20,000 building cost
6. 20,000 plus building cost

The next step should be a consideration of the density of development. In the first three classes above, I should be inclined to view with suspicion any mortgage submission unless the density was at least 15 per cent. In the second three classes, I should want a density of at least 25 per cent.

Analysis of density in neighborhoods is of first importance. It is usually difficult to establish the trend or character of a section until it is at least built up to the percentages previously mentioned. There are times, however, when this will not hold, for instance, where, due to zoning or deed restrictions, the character is established by the subdivider.

The third step in the analysis is the weighing of the locational advantages of the section. Why is it here? What is the justification for its existence? As a qualitative factor, an analysis should be made of the factors tending to anchor the locations.

The last factor to be considered under the general heading of the "Classification of the Section" is what I should call the "dispersion coefficient." In other words, how well has a section been controlled? Is it a subdivision which was exploited with a great hurrah, an auction of lots, and the sale of large numbers of them to speculative builders, or was it sold only to private buyers who either built immediately or who have intention of doing so within a reasonable period of time, say, not more than three years?

Leaving the neighborhood itself for a moment, an important consideration is the classification of the borrower or the owner. This classification should determine median income, racial factors, and other special factors, among which may be mentioned, the "horsy" crowd, the "country club" gang, and the "keeping up with the Joneses" mob.

All of the foregoing, of course, pertains particularly to the analysis of new sections or newer neighborhoods. When we come to deal with the older sections, the classifications mentioned above will usually fail or must be broadened due to:

1. Lack of zoning and/or deed restrictions.
2. Transition.
3. Lack of utility or demand.

Both single-family and apartment districts usually develop with considerable rapidity and more or less completely with a uniform type of development. In fact, in most of our American cities this is controlled in modern times through zoning restrictions or deed restrictions, both of which are designed to force proper economic utilization of land for the ultimate good of the entire population. Almost as soon as building stops in a new residential section, the area begins to decay and to decline. At first, this movement is so slight as to be negligible; in fact, in the better class sections it may not be a serious factor for a decade or two. However, in due time, the inevitable physical deterioration and obsolescence of the structures themselves have their effect. Those able to do so abandon such a neighborhood and are replaced by a poorer class, either as owners or renters. Sometimes this change is hastened by industrial and

commercial encroachments but more often by the infiltration of racial groups deemed undesirable by the former residents. Sometimes, on the other hand, this movement is retarded by natural causes, such as proximity to desirable locations: for example, in Chicago, nearness to the lake and to major fixed transportation lines, again by the formation of neighborhood groups designed to prevent the influx of undesirables, by deed restrictions, by neighborhood agreements, and by other means.

In the case of single-family districts, there is sometimes a conversion to multiple-family uses. This occurs, first, perhaps, through changes in the zoning ordinances, allowing utilization of left-over land, and then by demolition of the older houses on the more desirable sites. This type of economic supersession is seldom, if ever, complete and presents a very real challenge to straight thinking on the part of the appraiser: first, for the reason that transition proceeds very slowly, and, second, because of the fact that it is frequently violently opposed by the owners of the district. Due to the slowness of the rate of conversion, those multiple-family structures which were built first often deteriorate appreciably before the major portion of the territory is converted; in the meantime, the demand for such facilities very often shifts to a new district. With continued decay and infiltration of undesirable elements and commercial and industrial buildings, these districts also ultimately reach their end point.

The cause of the formation of these blighted districts is the interplay of the major social forces. In the first group are those economic forces which result in the gradual abandonment of the older residential areas, and in the second group are those which, operating through their effect on land values or the rent of land, create an inward or compacting force on the business centers, most particularly upon the central business district. The social forces are outward, in favor of new land and new housing in momentarily more desirable sections, while the economic value force is inward, toward the central district. The combination of the two produces a sort of vacuum within the circle of which anything may, and often does, happen.

Many people have the idea that supercession or transition is inevitable and that all urban land will ultimately become more valuable. Some of those in the real estate business and the owners of property in blighted or decaying districts are probably the strongest advocates of this idea. They justify their belief upon the basis of the natural growth and development of the city and the conversion of land to higher value uses. Nothing could be further from the truth, as an analysis of your own community will show. While, in general, there is an increasing demand in any growing community for real estate facilities of all kinds, this demand is, at best, evidenced in only certain limited areas—the growth or trend is not spread evenly over all sections.

Ordinarily, land in a passé residential district is a liability rather than an asset. There is no demand for such lots for improvement, and the remote possibility of development into a higher use classification adds little to value, for reasons which have already been pointed out.

In the determination of true value—which may be called capital value or the economic rent to be paid for the use and enjoyment of a piece of real property—as a part of the neighborhood analysis, consideration must be given to the character and cost of government of the political subdivision in which it is located. In the case of a city home, this is affected by the character of the population of the neighborhood—the economic level, if you please, the social and educational advantages tributary to the section. There must be streets, schools, sidewalks, sewers, running water, gas, electricity, telephones, and means of transportation in order to create these

values as land itself has little value without these improvements.

PHYSICAL AND ECONOMIC ASPECTS

A discussion of two aspects of this problem—the physical or reproduction value and the income or economic value, in their relation to each other and as one conditions the other—would appear to be in order.

Physical value is that capital outlay which would be required to obtain the land and reproduce upon it an average building comparable in utility and earning ability to the structure thereon, after allowing for depreciation and obsolescence.

Income or economic value is that sum which an informed investor would be justified in paying for a property, determined entirely upon the probability of the receipt of a continuing income therefrom. This value is, generally speaking, conditioned by physical value and can seldom exceed that value without producing destructive competitive forces.

In the determination of either of these values, the informed appraiser must give constant recognition to and evaluate all those economic forces which are constantly at work affecting the value of property at a given instant of time. Too often income value has been given preference over physical or reproductive value in the appraisal of a property; the appraiser forgets the fact that the excess value so obtained is not inherent in the property but is a characteristic of the business conducted in the property. This is particularly true in the case of properties housing chain stores and other conspicuously successful lines of mercantile endeavor. This is a highly speculative factor because of the tendency of capital return to be lowered by competitive building. I think I can best demonstrate what I mean here by an example: hotels in Chicago in the two decades from 1900 to 1920 were highly profitable. There were, at that time, about 11,000 first-class hotel rooms available in or near the Chicago Loop. In the eight years which followed, this room capacity was almost doubled, with the result that few, if any, of the Chicago hotels have made any money since.

I have tried to emphasize the necessity of classifying property by the type of district in which it lies and of determining, by neighborhood analysis, the state of development of that district. These factors may easily be of much greater ultimate importance than the specifications of the property itself.

Values in real estate are created as the result of the acts of man acting in the mass. The fact that many real estate ventures are failures is direct evidence that failure to determine accurately and to analyze the demand at a location leads to unfortunate results and substantial losses. Value in real estate must be recognized, therefore, as a creation of collective social forces and not the act of individual forces.

Much of the knowledge of the long range trends affecting real estate is qualitative in character, that is, descriptive of general phenomena which are likely to occur. It is against this purely qualitative background that those who deal with real estate must carry on their work. This, in itself, is the explanation of the fact that the education of the successful real estate man is never ended. To properly make the decisions which fall to his lot with each day's work, he must constantly strive to improve his knowledge, not merely his specific knowledge with respect to the properties in which he is directly concerned at the moment, but in all property in the territory in which he operates.

Because of the absence of quantitative data, many losses occur in the real estate market. There is an ever-growing need for statistical information about these trends—first, actually to discover the trends themselves and then to measure the rate of change so that practical applications can be made to specific, everyday problems. A start has been made in this

direction in the works of Homer Hoyt, Herbert D. Simpson, the University of Chicago staff in its recently published survey of Chicago, the United States Government in its excellent study of Kansas City, and in the survey that housing councils have undertaken in a number of other cities.

Every year decisions involving many millions of wealth in the aggregate are made without any very clear understanding of the economic forces and factors which control urban growth and movement. It is my belief that these losses can be materially reduced by the proper application of research and statistical control methods to the detection and measurement of trends in urban real estate.

* * *

Efficient Coal Consumption, the Buyer's Responsibility

By W. G. GREGORY

EVERY decade of our national life has furnished its own peculiar set of economic problems, and the decade through which we are now passing is no exception to that general rule. Problems of production, problems of distribution, and problems of consumption are by no means confined to the newer fields of industrial activity; they affect the older, basic industries of the country just as keenly. One advantage the newer industries and professions enjoy under modern conditions is that they start from scratch and are unhampered by "sacred cows" and the cobwebs of tradition that have grown around those which grew up with a new country and which carry the ideas of pioneer days into a world that changes almost overnight.

We in the coal industry realize that conditions existing today differ widely from those of a decade ago and that in ten years from now developments presently taking place will have wrought changes startling to those who still think in terms of the post-war decade. I venture to predict that in no respect will current heating practice show so marked a change as in our relations with property managers and in our approach to the heating problem which we share in common with them. Year by year, as new designs, new materials, and new ideas in building construction appear, the problem grows more complex. But whatever the future holds, the past has presented its own complexities which demand solution in the present. They challenge all the resources, all the ingenuity, and all the initiative we can command.

One lesson we of the coal industry have learned is to study the heating problem from the property manager's side of the desk.

ECONOMY IN HEATING

The demoralization in real property values following the collapse of 1929 has forced upon property owners a realization of the need for more efficient management, with a close check on every item that affects operation and maintenance costs so that the full potentialities of the property may be realized. With the margin between income and outgo as close as it has been and as it is likely to remain for some time, every factor that influences that margin demands the closest scrutiny.

Economy being the order of the day, it is pertinent to ask here, "What is economy?" Is it not, from the manager's viewpoint, the saving of money in operation and maintenance? If so, where is the saving to be made—in the purchase or use of materials? If a commodity costs 5 per cent less to buy but 10 per cent more to use—is it economical? If two similar commodities cost the same but one is more economical to use—is not price merely a relative factor in the transaction? Yet purchase of coal upon a price basis remains too common a practice among property managers who fail to look below the surface. The property manager who expects to show a profit cannot afford to guess on his coal economies. The type of manager being developed by new conditions looks behind the estimate figures and weighs the actual value secured in terms of service, satisfaction, and ultimate cash saving. He is more interested in coal specifications that meet definite plant conditions in a definite way and leave nothing to guesswork.

We have heard a lot in the past about efficient production; we are hearing much today about efficient distribution. Some day, perhaps, we shall hear a lot more about efficient consumption. In so far as

the building manager is concerned, *efficient consumption* is the kernel and the whole substance of the heating question. Solve that and your heating troubles are over.

Because efficient consumption is such a genuine problem and because of the fog of misinformation and misunderstanding surrounding it, too many managers treat it superficially without realizing that they are so doing. To them, efficient consumption becomes a matter of buying the cheapest coal the plant will burn, regardless of such factors as steam production, wear and tear on the equipment, amount of tender's time required, and, in smaller buildings, depreciation of the property because the furnace monopolizes the janitor's time and energy and he necessarily neglects his other duties.

A wrong approach to this subject of efficient consumption has set up a vicious circle in which the best interests of owner, manager, and coal supplier are sacrificed. The remedy lies in a frank, open-minded approach in which the first step should be to ascertain facts—then to act as they indicate. By this method the buyer is enabled to know beforehand just exactly what he is buying and why and just exactly what service he may expect from the coal he buys. The seller knows what he is expected to furnish and what the steam production of his coal must be. Guesswork is eliminated; theory is tested and proved before the purchase order is signed.

Let us dig into this matter a little further. Why does a building manager buy coal? Is it for resale in original form? No. To the plant owner, coal is a material from which steam is produced—not for the building owner himself but for the utility and comfort of others. The tenants are the ultimate consumers, whose rent provides the profit possibilities of the property. The pertinent question is then: How much steam will one grade of coal produce compared with similar grades at the same price? Can another type of coal be purchased *at any price* which will produce the same result at less cost? Mind you, the cost here is figured at the point of ultimate use—not at the point of material purchase. *The ultimate result per dollar* is the decisive factor which determines economy or waste of each coal purchase.

Technical Tests of Coal Performance

Can the buyer know these answers beforehand? Must he guess or take some glib salesman's unproved statement? Is accurate, scientific analysis and demonstration available? These questions may seem superfluous, but the sad fact remains that the majority of coal purchases are still made on guesswork or unsupported claims. And needlessly so, because *exact knowledge based upon actual test and demonstration beforehand is now readily available.* Furthermore, it has become an imperative factor in modern management.

The inclusion of such technical tests as a vital part of our company's sales service is no mere goodwill gesture; it is a clearly indicated need of modern coal marketing and a carefully tested method of promoting dealer-buyer cooperation. Most dealers and most buyers recognize the need for a reliable coal testing service, but not many dealers and still fewer buyers have at hand the equipment and facilities for making these tests. Furthermore, since plant equipment is as variable in types as the plants themselves, it can be readily seen that standardization of testing conditions is out of the question. The engineer who makes these tests must be prepared to take what he finds, whether it be a new type plant or an antique. He must study its capacity and the demands made upon it, and then, bearing in mind every factor which may affect cost, he can discover by actual test and demonstration the type of coal which will give best results at lowest cost.

It is no part of the engineer's task to make recommendations unless specifically

asked; his job is to find facts and to report them. As a further step in promoting enlightened cooperation, our engineer on the job is particularly careful to convey by his attitude the fact that he is working *with* the engineer in charge of the plant—not to antagonize, not to patronize, and not to show up but to cooperate with and help him in every way, so that in discussing the problem before them, they may jointly arrive at its solution.

As a result, latent suspicions are disarmed, distrust and resentment give way to understanding, and harmony is established where otherwise passive, if not open, opposition might be engendered.

Although the maintenance of this service is a heavy charge on the sales department, its merit has been proved in the ultimate reduction of selling costs in the case of our own company. By lowering the proportion of initial orders to total volume and increasing the number of repeat order customers, it has reduced the average per cent cost of total sales. Thus, it has been possible to further extend this cooperative testing service. In fact, so valuable has this service proved to both dealer and buyer that we prefer to refuse an order for a grade of coal other than that which our engineer's report indicates as most advisable. Having in mind the comparatively high cost of initial orders, we realize that this customer will not be satisfied with unsuitable coal and that the job of selling him will have to be repeated under the added handicap of his dissatisfaction. That may seem like stretching business idealism too far, but to us it looks like plain horse sense. Call it enlightened selfishness if you will; it works to the purchaser's and/or consumer's benefit as well.

Now, the engineer, thoroughly trained, experienced, and competent though he be, is no miracle worker. All he can do by the application of standard tests is to find facts, *but these facts are of vital import to the property manager*. He can also confer with your building engineer, if necessary, on how to handle his heating materials and facilities for the best effect. Furthermore, this fact-finding service is available to you in testing comparative values of fuels other than coal. Perhaps gas or oil is more desirable in some cases. The engineer reports what is indicated as best for the property, even though competitive fuels benefit by his advice. His analysis brings to light not what you would *like* to know but what you *ought* to know.

EACH HEATING PLANT PRESENTS ITS OWN INDIVIDUAL PROBLEM

If you, as the manager of many properties, have an analysis made of one or more plants with a view to getting a typical cross section view of your heating problems, let me warn you against a very common and a very costly error. No two plants are exactly alike. Each is an individual problem, to be studied unto itself and separate from any other. This holds true even though the general design of each may be similar. Even if built by the same firm in the same year, so variable are the factors involved that no two plants may be safely considered identical. Approach each plant with an open mind as to its possibilities, advantages, defects, and needs.

As previously stated, few retail dealers have the equipment or facilities for making thorough coal tests or the technical knowledge to use such equipment. Some, however, do keep such equipment on hand for the convenience of the buyers' own testing engineers. In some sections of the country local coal institutes render this service to their own members. Eventually, it is hoped that similarly thorough tests will become standard practice in the industry. In our company, all of the dealers have access to the full resources of our engineering department, without cost to the prospective buyer, and are, in fact, encouraged to take advantage of it, the only stipulation being that the tests be impartial, thorough, and complete.

One outstanding cause of heating trouble, which crops up continually in these analyses, is the unsuitability of the plant to the building. Frequently this vital point is subordinated to the architect's desire to utilize the utmost possible space, in accordance with his instructions from the building owner. Seldom is the fuel engineer consulted except in a perfunctory way, with the result that frequently complete overhauling and reconstruction of the heating plant become necessary. So common has this experience been during the past decade that its lesson is rapidly sinking in, and, before the next building boom breaks upon us, the fuel expert will sit in on the drafting of plans with the building contractor and the architect of all efficiently managed properties. When that happens, his first advice will be: *"Don't build your heating plant for any one specific type of coal but keep it as flexible as possible for varying grades."* The building owner or manager who follows that advice will be spared many a headache.

Five-Year Old Coal Burning Standards Now Outmoded

The thoughts set down here have been prompted by a mental review of what has been happening in the coal business and the clear indications of what is coming. Modern-minded property managers—and their number is increasing—aware of current and impending changes in the field, recognize the pertinence of these remarks.

Like its sister enterprise, the railroad, the coal industry had been coasting along on its own momentum through decades of self-satisfied lethargy, serenely confident that no newcomer could seriously challenge its supremacy in the fuel world. What competition existed arose chiefly within the coal industry itself and was not always of a sound, constructive nature. Finally, under the spur of new fuel competitors, whose challenge rang on every front of the industrial field, coal producers suddenly snapped into a realization that newer, more efficient means of coal combustion must be found. Again we find a parallel to the railroad, whose streamline models answered the challenge of the automobile and auto truck. During the past three years, improvements, inventions, and modifications in coal burning machinery have been so rapid and so drastic as to virtually revolutionize the industry.

So fast are new developments taking place and so many are the new ideas being worked out that one may well ask whether ten years from now today's standards will not be as completely outmoded as those of five years ago are at this writing. If that comparison seems exaggerated, just check into some of the radical departures in coal burning technique that have appeared in the past five years. The property manager who uses five-year old standards as the yardstick of today's needs is due for a rude awakening.

Determining Value in Purchasing Coal

Much of the inefficiency in coal consumption is directly due to unsound purchasing policies. There is one unfailing method by which any purchasing agent may determine values, and it is here submitted in his own language for the coal buyer's consideration:

1. *Does the product offer a GREATER value?* A lower price for the same quantity and quality of coal or a greater quantity of the same quality coal for the same price will give an affirmative answer to this query. But, be sure of your quality! Cheapness is no test of value, and plant repairs due to the use of inferior coal may offset many times the apparent savings in buying.
2. *Does the product offer a BETTER value?* All other factors being equal, is the rate of combustion and heat production more uniform—does this coal produce *more steam per dollar*—or is the result attained more desirable in any way than competitive coal offered at the same price?

3. *Does it offer a DIFFERENT value?*
Has the coal being considered any distinctive feature not obtainable in any competitive grade?

Unless one or more of these three factors are present, the intelligent buyer will reject the offer. The junk yards of the nation are cluttered with boilers and furnace parts ruined beyond repair by injudicious selection of fuel.

If this subject of efficient fuel consumption seems to be unduly emphasized here, there is a very definite reason for the emphasis. It ties in with every heating problem that arises in any type of building. There is no longer any serious production problem in the coal industry; modern machinery and mining methods have overcome most of the difficulties formerly encountered. That applies also to coal distribution.

The coal market remains wide regardless of new competitive fuels. In fact, many large fuel consumers, who, carried away by the broad, insistent claims of competing fuels, discarded coal as a supposedly outmoded medium of steam or heat production, have found that coal still remains the most economical and satisfactory of fuels for their particular needs. Not that other fuels may not prove equally or more efficient under certain conditions—every property has its own requirements, and it is admitted that under given conditions other fuels may prove more desirable than coal. That decision, however, is not within the province of the layman to make, nor should it be made on snap or superficial judgment. Cold-blooded analysis and correlation of all the factors involved can be made only by disinterested experts using scientifically approved tests. Common sense interpretation and application of facts brought to light by those tests will undoubtedly affect the profit and loss statement of any property. Self-interest and due regard for the client's welfare should prompt the property manager to insist on a complete analysis of plants entrusted to his care before placing his fuel order. Progressive coal wholesalers and retailers now recognize this problem of consumption as their own as well as the consumers and are eager to cooperate in its solution.

In any discussion of "cooperation," it should be borne in mind that this overworked term implies a union of effort for a common purpose. Cooperation cannot be a one-sided arrangement. The most cooperative coal dealer can do nothing for a property manager who neglects to work with him in finding and buying that grade of coal which will most efficiently produce steam in his plant. That the cooperative approach to mutual problems has been stimulated by the pressure of events is indicated by these extracts from a recent brochure on property management, published by one of the most progressive management organizations in the Middle West:

> "Property . . . deserves the care and attention necessary for the development of the full potential possibilities it possesses . . . the care of myriad details of efficient management, all coordinated into a harmonious cooperative effort, results in greatest economy and greatest earnings. . . . Few individuals are thoroughly proficient in all its phases. . . . Many changes of policy have already taken place, with many more to come, as new conditions and unusual situations must be met. Owners of income property are particularly concerned with the future. . . . careful analysis and study of the strength and weakness of facilities at hand are essential. . . ."

Discussing innovations in design and construction, this author further points out the need for management personnel keyed to appreciation of new problems presented. "Qualified building management," he tells us, "has become a highly technical and scientific profession." While his comments are necessarily general in their application, they may be fittingly applied to the specific problem of heating—that rock on which so many management enterprises have perished in the past.

On the other hand, let us read the following "expert" viewpoint. In discussing the duties of the purchasing department

of a property management company, the author says:

> "This department should be capable of purchasing coal, electric bulbs, and supplies of all kinds, and engaging janitors and other necessary help."

Ye gods! Coal, electric bulbs, and supplies of all kinds, including, presumably, grass seed for the lawn, if any. Is this a typical reflection of the management expert's view of the vital heating problem? Is it any wonder that tenants freeze, plants depreciate beyond reason, and managers tear their hair, while profits disappear and property accounts are totalled in red? The quotation above expresses the attitude of many managers to whom coal is just another necessary evil—an item of expense to be purchased at the lowest possible rate and with no further analysis than the lowest figure obtainable in a price-cutting contest. New inventions and new ways to cut heating costs are not mentioned here—just the same old superficial generalities that prevailed in "the good old days."

It is heartening to turn from this to a sounder and more progressive viewpoint enunciated by an outstanding figure in the management field. In discussing purchases, he says:

> "The purpose of the purchase should be set up clearly in the seller's mind so that he may properly understand the buyer's problem and convey to him in his proposal the value of his own knowledge and experience. . . . "

Further on he displays firm grasp of a business fundamental:

> "It is a well-proved and accepted fact that the purchasing agent should not be governed entirely by the price submitted."

Here we discern appreciation of the axiom, "The answer to the price argument is quality." When coal buyers learn that lesson, the coal industry will be in a position to prove through its cooperative efforts the truth of another axiom, "He profits most who serves best."

* * *

A Case-Study in Apartment House Rehabilitation

By W. A. HELWIG

IT frequently happens that rehabilitation plans become an indispensable part of the management program for a particular property. This report is an example from actual practice and shows how one real estate office analyzed the problem.

This presentation is not intended to be a "model" nor a precise demonstration of a procedure that can be followed without variation in all cases. It is hoped, however, that the readers of this magazine will find the report not only interesting but full of valuable suggestions which they can utilize in their everyday work.

C. M. Harmon Company,
Mortgage Correspondents for
Provident Mutual Life Insurance Company,
2812 Union Guardian Building,
Detroit, Michigan.

Gentlemen:

In accordance with your request, we have inspected the property located at 3525 Cass Avenue, known as Aderna Court Apartments, being a forty-five-family and four stores, four-story, elevator apartment building. We have surveyed the neighborhood and inspected the building with the prime object in view of establishing a management program for the complete rehabilitation of the premises.

The enclosed report includes our findings and is supplemented by detailed specifications for contract work, bids received to date, and our cost estimates for the completion of the job. You will find that we have included considerable detail already known to you; this detail was primarily as supporting evidence to our conclusions and for the purpose of having our records complete.

We have estimated the total rehabilitation cost, including the replacement of refrigeration and gas stoves, to be $21,945.56.

In our letter, which will reach you under separate cover, we have appraised the property before and after rehabilitation. This analysis resulted in the conclusion that, through the expenditure of the above amount, the economic value of the property will increase by $82,350.00.

Sincerely yours,
H. P. HOLMES, INC.,
By W. A. HELWIG (Signed)

PROPERTY LOCATION

The property is located on the west side of Cass Avenue between Stimson and Brainard Avenues, Detroit, Michigan, this being one block west of Woodward Avenue, twelve blocks from Grand Circus Park, and one and one-quarter miles in a northwesterly direction from the Detroit City Hall.

LEGAL DESCRIPTION

The legal description of the property is as follows: Lot 3 and the northerly 17 feet of lot 2, block 89, Cass Farm, Detroit, Wayne County, Michigan.

PERTINENT NEIGHBORHOOD DATA

General: The neighborhood in which this property is located is considered one of Detroit's residential districts "C." In this district 51 per cent of the renting public pays a monthly rental of $30 or less, while 47 per cent pay between $31 and $55. Of all the families in this district, 92.6 per cent have at least one person employed, and 59 per cent have automobiles.

The immediate neighborhood is approximately 60 per cent developed. Dominating the neighborhood are the six-story, 78-apartment "Niome"; the 100-room "Aderna Hotel"; the subject property; a 24-apartment building; and the 8-story "Architects Building." The balance consists of smaller multiple-dwellings, neighborhood stores, and commercial and semi-commercial developments. Of the larger buildings, at least two—the 78-apartment "Niome" and the 24-family apartment

building—are scheduled for a complete rehabilitation at a cost of approximately $50,000 to $65,000 each. Several store properties have changed tenants recently, and a number of vacant properties have been rented, which evidences a general improvement in the neighborhood. This general forward movement seems to be caused by several forces: first, by the steadily rising, almost prohibitive, construction costs of new buildings and consequently a continued housing shortage; second, by labor difficulties inevitably arising on new construction jobs; and, third, by the public's comprehension of economic laws, its refusal to destroy the existing in preference for something new, and the manifest realization that 1929 catastrophes can be avoided only through the conservation of existing wealth, the taming of the gambling spirit, and the appreciation of the term "sound value."

Transportation: This is an important factor in the lives of the renting public; perhaps it is as important as the livability of a multiple-dwelling.

Motor bus service is maintained on Cass Avenue, which runs north and south in front of the Aderna Court Apartments. The Charlevoix and Cross-town trolley cars travel on Cass Avenue from Stimson to Selden Avenues, one block south and two blocks north, respectively, from the property location. Parallel to Cass Avenue one block east is Woodward Avenue, Detroit's main north and south artery, and parallel to Cass Avenue one block west is Second Boulevard. Downtown Detroit may be reached by less than a twenty-minute walk from the property.

Adequate parking space is available on a vacant lot directly in the rear of the building, and a garage having heated storage space for approximately sixty automobiles is located directly north of the subject property.

Site Data

The land is sixty-six feet wide, fronting on Cass Avenue, and extends west 150 feet to a sixteen-foot paved public alley. It is level and has all underground public improvements, such as water, gas, electricity, and telephone service. It is an inside lot, and both adjacent parcels are improved.

Building Data

General: The Aderna Court Apartments is a four-story and full basement elevator building of ordinary construction, i.e., masonry supporting walls with soundproofed wood floor and partition wall framing on steel joist supports. It has four stores and forty-five apartments, consisting of thirty-eight three-room and seven two-room units. One three-room apartment is located in the basement and is occupied by the janitor, while the manager occupies a three-room unit on the first floor. The building, completed in 1924, covers the land with the exception of four light courts and a fourteen-foot easement between the rear of the building and the alley.

Building Dimensions	66′ x136.1′	
Two South Courts	22′ x 19.9′	
Two North Courts	22.9′x 18.5′	
Ground Area of Building	8,125 square feet	
Cubic Contents	370,000 cubic feet	
Rentable Floor Area—		
Stores	1,447 square feet	4.44%
Apartments	21,628 square feet	66.52%
Total Rentable Space	23,075 square feet	70.96%
Service Space	9,442 square feet	29.04%
Total Floor Space	32,517 square feet	100.00%

Livability and functional plan: The architectural apartment layout is good, especially when compared with other buildings in this neighborhood. The rooms are fairly large, and their wall space permits effective furniture arrangement. From the functional point of view, this building represents a good average. Considering the lobby, halls, two stairways, elevator shaft, and basement as service space, we find that this area represents 29.04 per cent of the total, while 30 per

cent is considered a good average. There is no available space that may be put to better use without jeopardizing certain quality factors.

The elevator is in a favorable location, i.e., near the front and occupying space that could not have been used to better advantage. Rather than use valuable space in the front part of the building for the main stairway, as is so often done, the stairway was placed back of the elevator in such a way that it draws its natural light through windows in the south side court elevation. The rear stairway has tall French windows which open inward and permit the moving of heavy furniture by means of a pulley arrangement that may be attached to a suitable steel beam provided for this purpose. The boiler room and coal bin, of carload capacity, are located in the extreme rear and north part of the basement, which location renders difficult proper steam distribution. (This matter will be discussed later in this report.) All other basement space has been favorably divided: store rooms are adequate as to size and location; meter rooms can be barred to the public; the laundry and drying rooms will be pleasant after rehabilitation; and one locker room with seventeen individual lockers and a former "bookie" room in the front part can be fitted into a much needed trunk-storage room.

Since the livability and the functional plan of the building are of utmost importance, it is quite satisfying to note that the building complies with all fundamental requisites to a favorable degree.

Structural soundness: In general, it would appear that the building has been well built. No settlement cracks have been located. The load bearing walls are sound and rest upon concrete footings of proper design, materials, and workmanship. There are, however, several cracks in the plaster of the lower halls and the front apartments. Some of these are caused by lumber shrinkage, while others, especially those in the hall partition walls and those running horizontally just below the steel joist supports, are the result of the difference in coefficients of structural materials. None of these cracks is a cause for worry; they can be permanently eliminated by a method which will be described later.

Such indications as denote weak beader construction or improper bracing and bridging are not present; the doors swing freely, windows open easily, and the floors are solid. In most all of the apartments, however, the base shoe mouldings need to be lowered from one-eighth to one-quarter of an inch, which again is the cause of joist shrinkage.

Architecture: The design of the building is of English origin, commonly known as Georgian architecture. Its facade shows a good proportion between masses and openings. It stands for a fine appreciation of simple beauty; its durability is assured by good materials and craftsmanship, which lend a certain character to the structure that may well serve as a guide for the future management of the property.

Roof and exterior trim: The composition tar and gravel roof is in need of repair; at least three leaks have caused damage to plaster. It will be necessary to resurface the roof and replace all eaves troughs and some conductor pipes. Crock copings of fire walls and parapet walls, as well as most stone copings of the front parapet wall, are loose, have open joints, and consequently expose the masonry walls to the elements. The exterior wall mortar joints are in fairly good condition. Only where the stone joins the brick do openings appear, which are due to the fact that the same mortar designed to bond brick to brick was used to bond stone to brick. A mastic joint should have been adopted in the latter case as natural stone and brick differ considerably in porosity and therefore require different mortars.

All exterior wood trim and metal and iron grill work need painting, not only for the sake of appearance but for preserva-

tion. A considerable amount of glass is broken, and some windows are entirely boarded up.

Mechanical and convenience equipment: The heating plant consists of an S-4010 Utica Cast Iron Boiler supplying steam for a two-pipe gravity return system. It has been in operation for twelve seasons and should, considering ordinary wear and tear, have a remaining useful life of ten to fifteen years. Its present poor condition is the combined result of gross negligence and erroneous judgment in making certain installations, repairs, and additions. A "Combustioneer" stoker has been operated in the past, and we were advised by the stoker service company which serviced the equipment that it has been the cause of considerable trouble for at least five years. The boiler was tested, and four cracked sections located, namely: the front section and intermediate sections six, seven, and eight. One fortunate factor exists in that the boiler has sufficient grate area to make it more than adequate in size for the building. At no time should the boiler have to be forced to assure proper heating; the disadvantage of long feed lines, due to the location of the boiler room in the extreme rear of the basement, is partly reduced by the use of an oversized boiler. We propose to effect several changes in this system, which will be discussed in detail in the section "Heating Plant Repairs."

The hot water system consists of a Capital Hot Water Heater and a 940-gallon asbestos covered storage tank. The heater is somewhat undersized and has been estimated to produce less than a forty-degree temperature rise per hour. It is in a good condition, however, with the exception of minor defects. It seems advisable, therefore, to give it a thorough trial before considering a larger unit. Even though the storage tank seems to be in a fair condition, the system could be improved upon. The circulating lines, in our opinion, were improperly installed. The building feed line draws directly from the heater, with the result that one tenant may get exceedingly hot water and another tenant may have to wait or be content with the cooler water from the storage tank. In changing the building feed line to leave the tank at the opposite end, several objectives would be achieved: better circulation in the tank, greater storage, and better preheating of the cold water entering the heater.

The refrigeration system is obsolete; it consists of three multiple Frigidaire units. The reconditioning of the compressors, the boiling out of the coils, replacing of floats, etc. would entail a tremendous expense. Since the entire system is not included as security to the mortgage and remains the property of the lessor, it would be advisable not to enter into a purchase agreement but to reject the entire system even as a gift.

The gas ranges, having a useful life of five to seven years, are at least ten years old and should be replaced.

The elevator is an Otis passenger push-button type with floating platform. It has a capacity of 1,000 pounds and operates on a direct current of 240 volts. Considerable work will be necessary to put this equipment in a safe operating condition.

Natural light and ventilation: The front and rear apartments have larger window openings than the building code requires and are exceptionally well designed from the standpoint of light and ventilation. The court apartments are less agreeable even though all four light courts are several feet larger than the code requirements adopted by the City Board of Health. All rooms have window openings and can be properly ventilated without artificial appliances. The apartments on the north side are favored by the fact that the adjoining building is only three stories in height. The building to the south is of the same height as the subject property. All court wall elevations are of common stock brick and reflect little light.

Resistance to use: Any multiple-dwelling, emerging from a five-year "milking"

period, can offer very little resistance to further use; such a building must be credited with exceptional stamina for having survived.

It is quite safe to say that less than 30 per cent of all the wall and ceiling surfaces have been cleaned during the past two years. Those that have been recalcimined or repapered show evidence of very poor workmanship. One three-room apartment has not been occupied for some time and is so filled with broken furniture that entrance may be gained only step by step as the debris is removed and discarded. Another apartment is in a similar condition, with the exception that the obstructions camouflage the unrepaired damage of a fire.

PRESENT RENTAL INCOME

Apartment Number	Furnished or Unfurnished	Monthly Rental
Beer Garden		$ 70.00
Barber Shop		35.00
Vacant Store		— —
105		— —
106		— —
107		— —
108		— —
109		— —
110	F	28.00
111		— —
112		— —
201	F	45.50
202		— —
203		— —
204	F	36.50
205	F	40.00
206	U	30.00
207	U	30.00
208		— —
209		— —
210		— —
211	F	30.00
212		— —
301		— —
302		— —
303		— —
304	F	32.00
305	F	39.00
306		— —
307	F	36.50
308		— —
309	F	39.00
310		— —
311		— —
312		— —
401	F	45.50
402		— —
403		— —
404	F	39.00
405	U	30.00
406	F	39.00
407	F	40.00
408		— —
409	F	33.00
410	F	34.50
411	F	36.50
412	F	37.00
Total Monthly Rental		$826.00

All unoccupied apartments are in such condition that they could not be rented at any price. At least two tenants are unemployed and receive welfare aid.

CHARACTER OF TENANTRY

Excluding a few exceptions and speaking in general terms, it cannot be denied that the force of public character, capable of transforming a neighborhood from positive to negative and back again, is distinctly negative in this neighborhood. There are a few tenants, who, by virtue of their social status and conduct, deserve to be retained. However, the retention of one single occupant would prove to be a constant hindrance during a complete rehabilitation and would result in a greater loss than that caused by the ill will of asking even the desirable tenants to vacate.

We realize, too, that while social upheavals are brewing, special precaution must be taken in a complete evacuation of the premises as the wrong kind of publicity may result in irreparable damage.

EXTERIOR REPAIRS

Having recorded the present physical condition of the property as well as its income potentialities for the purpose of obtaining a bird's-eye view of the project, we shall endeavor to present in detail in the following pages the facts as we see them. Our opinions and suggestions have been based upon these facts and have been formed after due deliberation on each subject.

Cleaning the facade: The front elevation consists of a good grade wire-cut pressed brick with approximately one-fourth natural stone used for entrance detail, bays, window reveals, quoins, parapet wall copings, window sills, and pinacles. There are sufficient undercuts in these ornaments and plane mouldings to render a successful wash job difficult. Bids have been obtained from reputable concerns specializing in the various lines, as follows:

Low pressure sand blasting	$150.00
Steam and water cleaning	175.00
Washing	235.00

Normally, we do not believe it good practice to use the sand blast process on any masonry as it results in the destruction of the weather surface on stone as well as on brick and mortar and thus facilitates the absorption of moisture and the consequent deterioration of materials. However, the firm which submitted the lowest bid sand blasted this building several years ago, and the original weather surfaces, therefore, have been injured; since most of the mortar joints are in need of tuck pointing, it has been decided that the difference of $25 may as well be saved on cleaning and used for tuck pointing.

Tuck pointing and masonry repairs: Following are the specifications for tuck pointing and masonry repairs:

> On the front elevation rake all non-weather tight mortar joints of brick work and refill same with waterproof cement mortar. Where brick joins stone, as well as where stone joins stone, remove all mortar to a depth sufficient to insert a mastic joint. Reset all loose parapet wall copings (stone or crock) into a solid bed of waterproof mortar. Reset stone pinacles and anchor properly. Replace missing and broken roof slate of center point. Reset chimney caps and extend crock flue lining to at least six inches above cap line. Remove all aerials, leads, nails, brackets, etc. which are nonstructural and fastened to or connected with any surfaces herein mentioned. Caulk all windows and door openings in the front elevation with a suitable caulking compound. Temporarily remove the refuse receptacles in the rear of the building and fill in the cavities with broken glass furnished by the owner; tamp this well to form a base and then provide a six-inch monolithic concrete footing for the receptacles. Make arrangements with the janitor for the proper curing of the concrete and the replacing of the receptacles not sooner than seventy-two hours after pouring the concrete.

Estimates covering labor, materials, and tools to finish this work as specified vary from $50 to $300. The latter appears as unreasonably high as the former appears low. This work, especially the tuck pointing and caulking, should be arranged to follow the first operation of painting the exterior trim. In this way, the swinging scaffold could then be borrowed from the painting contractor, with the actual work being performed by skilled tradesmen under our supervision. Duplication of effort would be avoided, and satisfactory results would be obtained for the approximate amount of $100.

Roofing: We propose to change the present composition tar and gravel roof surface to an asphalt roof. Roofing contractors differ in their opinion when considering such a change, those opposed claiming that asphalt will not adhere to a tarred surface. They invariably recommend laying the first layer of asphalt felt dry and nailing it securely to the roof board; they claim that this will allow for expansion and contraction, while, if the first layer of felt is rolled into the hot asphalt, blistering and cracking will result. We do not deny that blistering and cracking will occur, but the causes do not seem to lie in the expansion and contraction of the roof structure—rather in the incomplete removal of gravel, sand, and dust before the first mopping of hot asphalt is applied. We know of several roofs which have been resurfaced in a manner substantially the same as hereinafter specified and which have weathered the fourth year of their five-year guarantee without blistering or cracking.

The roofing specifications are as follows:

Remove all gravel and debris from roof and sweep all surfaces until free from sand and dust. Remove all aerial wire, sticks, braces, hooks, and nails from the roof, vent pipes, parapet walls, etc. Replace all six-inch box conductors with new twenty-six-gauge conductors of same size and shape. Check all downspouts and paint all exposed surfaces of new work one coat of red lead paint. (Use no substitute such as tinner's red, etc.) Furnish and install a new incinerator screen.

All flat roof surfaces, including both penthouse sections, are to be treated as follows: apply one heavy mopping of hot asphalt to the cleaned roof surfaces. Roll one layer of thirty-pound asphalt felt into this asphalt while still hot and then apply a second mopping of asphalt; next, roll one layer of fifteen-pound asphalt felt into the second mopping of asphalt while it is still hot; and, after each roof section has been treated in this manner, apply the third and final mopping of hot asphalt. Treat all flashings in the same way. No nails shall be used in this work, and no parapet wall surfaces, other than flashing space, shall be coated with asphalt or any other waterproofing material.

Furnish a five-year guarantee and agree to repair or replace any and all defective material or workmanship during this period.

Submit a separate estimate for the installation of community aerial cables as follows: furnish and install three galvanized wire cables running parallel with the front parapet wall, one to be placed at a point approximately three feet from the front, a second approximately three feet from the rear building line, and the third approximately at the center of the roof, all to be not less than eighteen inches above the roof surface. Anchor these cables to the masonry parapet walls at the points specified above and by means of expansion bolts with eye and turn buckle at opposite ends. This installation is intended to safeguard the roof from such common abuses as nailing boards and uprights to the roof, sticking rods and boards into vent pipes, fastening aerials to chimneys and penthouse door hinges, etc. Since this measure protects the building as well as insures the roof guarantee, the cost of this installation should be estimated accordingly.

Four contractors have submitted estimates in the following amounts:

Contractor A	$442.00
Contractor B	431.00
Contractor C	446.00
Contractor D	630.00

Contractor B is the low bidder because of his proposal to nail the first layer and apply only two coats of hot asphalt. The others approve of our specifications. Contractor A has done considerable roofing work for us during the past three years and has earned our confidence.

Glass and screens: In checking all missing, broken, and cracked glass we found that seventy-three pieces needed to be replaced. These included clear, double strength for major rooms, Florentine for baths, polished wire plate for fire doors, special translucent for elevator doors, and translucent glass for skylights. The lowest bid submitted for the material amounts to $47.21.

Approximately eighty-five screens are in need of repair or replacement. The screens used in this building are of a patented type operating on screen guides and provided with intricate spring fasteners, the manufacture of which has been discontinued. Replacements should be made with a later model commonly used on double-hung windows, operating on hinge type hangers and fastening by means of hook and eye at the sill. We propose to manufacture these screens on the job with our tradesmen at an average cost of approximately seventy-three cents per screen, which is less than the cost of the screens now in use.

The glazing can be done by the men who make the screens. By using rubber putty for metal doors and skylight frames, further cracking of glass caused by the difference in expansion and contraction of glass and metal can be eliminated.

The total cost for labor and materials covering the items has been estimated not to exceed $210.

Exterior painting: It has already been mentioned that all exterior trim is in need of painting, not only for the sake of appearance, but also for preservation. Bids have been based upon the following specifications:

All previously painted surfaces of windows,

doors, gutters, downspouts, etc. are to be treated as follows: brush and remove all dust. Where paint is peeling, cracked, or alligatored, prepare surfaces properly (scrape loose paint or remove by burning). Remove loose and cracked putty. Paint all above surfaces two coats of "R. & M." exterior paint green (shade No. 6438) and apply in strict accordance with the manufacturer's specifications.

Paint all screens one coat of screen black, new screens to receive two coats.

Thoroughly clean all iron grill work with a wire brush to remove all rust and scale and then paint with one coat of red lead and one coat of exterior paint green.

Finish to an antique effect all ornamental cast iron work of the front entrance. Include two coats of paint in your estimate and allow $20 for finishing operations. (Submit sample.) Apply two coats of Aqua-Resco, white or cream, to the four light courts, all brick work being part of the building. One coat may cover the surface satisfactorily, but two coats will produce a waterproof surface and will reflect the light to a greater degree, which after all are the purpose and intent of this work.

Treat the front entrance door and the two vestibule doors (the latter now stored in the basement) so as to restore their original finish, i.e., remove all varnish and paint, sand all surfaces to a smooth finish, stain with light oak penetrating oil stain, and apply at least three coats of best exterior spar varnish (sand lightly between coats). The work on the brass trim will be taken care of by others.

Cause all of the above mentioned work to be done in the best workmanlike manner according to approved methods and practices, including the puttying of windows after the first coat of paint has been permitted to dry, etc. Guard against damage by rain, dust, and other influences and assume full responsibility until the work is completed and accepted.

Three reputable contractors covered by workmen's compensation and public liability insurance have submitted the following estimates:

Contractor A	$850.00
Contractor B	947.00
Contractor C	957.00

We feel that the contracts for exterior painting and interior decorating work should be awarded to the same contractor, and, therefore, we shall refer to these estimates later in this report.

Exterminating

Our inspection revealed bedbugs, roaches, silverbugs, bettles, and rats. A combined method of fumigating and exterminating would be advisable. Bedbugs and rats can be most effectively destroyed with cyanide or hydrocyanic acid gas, but neither of these gases will harm roaches, silverbugs, or beetles as they have no lungs and therefore do not inhale the gas. They must be exterminated with a specially prepared powder. The following estimates include all necessary insurance and a two-year guarantee:

A	$115.00
B	160.00
C	263.00

For the past three years A has serviced satisfactorily all of the buildings under our management. Undoubtedly, this is the reason he is able to submit the lowest bid.

Wall Paper Removing

Whether the walls are to be repapered or painted, the wall paper will have to be removed. In most cases the original paper is still on the wall, covered by from five to seven additional layers. Hanging paper over more than one or two layers often results in damage to the plaster putty coat, especially if the brown mortar were of a poor mixture or permitted to dry before the expiration of its setting time. The putty coat then cannot properly bond to the brown mortar surface, and the removing of paper usually removes the putty coat as well.

Several tests have been made, and we are able to report that the plaster is in fairly good condition. We have been able to locate a janitor who has had some experience in removing wall paper and who is now operating the steamer in some of our vacant apartments. He, however, cannot remove all the paper and still perform his other duties. Therefore, we have obtained estimates from three firms specializing in this line. They are:

A	3-room apartment	$7.00
	2-room apartment	5.00
B	any apartment	8.50
C	any apartment	9.50

There are thirty-eight three-room and seven two-room apartments, which would bring the above quotations to:

A	$301.00
B	382.50
C	427.50

Considering the lowest bid, together with the fact that some of the work will be done by the resident janitor, we believe that the expenditure for this item will not exceed $260.

CARPENTRY

Considerable carpenter work will be necessary to put the building into a fair condition. Many minor operations, such as refitting of cupboard doors, resetting of hinges, replacing of wornout cupboard turns, sash locks, sash cords, lowering of shoe mouldings, etc., may cost but little in one apartment but will grow to sizable sums where multiplied by forty-five. Many wood drainboards are watersoaked and rotted out. Approximately 300 square feet of No. 1 common red oak flooring is acid and burn stained and will have to be replaced, especially if the apartments are to be rented unfurnished. Twenty-two room doors have been taken off their hinges, either to suit the tenants or because minor repairs were necessary, and are now stored in the basement. They should be repaired and put in place. Several pieces of brick moulding on two of the store fronts and two penthouse doors are in line for replacement. A four-tread penthouse stair of yellow pine was never painted and is beyond repair. A roof saddle should be constructed so that better drainage may be effected on one side of the elevator penthouse. Many apartment door jambs and stops have been abused and need replacing; several dozen hinge pins are missing, and at least fourteen door locks are beyond repair. All ice delivery doors, which are no longer used, should be either removed or the hinges and trim taken off; the doors should be fastened with screws and fitted with quarter round moulding. The latter has been considered in our estimate to cost approximately $.38 per door. The complete removal of door and frame and the closing of the opening by studding, lathing, and plastering would cost $2.87 each, or nearly $130 for the forty-five apartments.

We propose to remove all picture mouldings and discontinue their use as we consider them a thing of the past in apartment buildings. From the maintenance standpoint, the picture moulding is no more than a dust collector and a vermin refuge.

On a job of this type, it is rather difficult to obtain bids for carpentry and other preparatory work. Contractors will either overestimate to be safe or they will underestimate to get the job and depend upon "extras" to make a profit or break even. We, therefore, propose to have this work done by competent craftsmen upon an hourly basis under our personal supervision. The cost has been estimated not to exceed $975.

IN-A-DOOR BED REPAIRS

Each living room is equipped with a "Murphy" bed, and all are in need of repair. Many mattress tie clamps are missing, springs are worn out, and tie rods are bent. Three beds which have been taken off their hinges and stored in the basement have apparently supplied needed parts in the past. We received an approximate estimate of $225 from one concern, but upon checking all beds with our metal bed repair man, it was found that all necessary work could be done for $135.

TILE REPAIRS

All bathrooms have hexagon tile floors with six-inch base and three by six-inch white, glazed tile wainscoating over the

tubs. Door sills and window stools are of Tennessee marble.

Considerable repair is needed to place this tile in a satisfactory condition. In some instances entire walls are loose, which is perhaps due to the fact that the tile was not properly soaked before setting. Approximately 220 feet of tile base need resetting. This is attributable to the faulty practice of providing a base consisting of a coat of cement mortar on wood laths instead of a scratch coat and brown coat of cement mortar applied on metal lath.

Another major item is represented by large openings between the top rim of the double shell bathtubs and the tile wainscoating, caused by settlement and shrinkage. The openings are in some cases from three-quarters to one and one-half inches wide and are a source of constant trouble unless periodically inspected and conscientiously repaired with Keen's cement. Usually, however, they are not reported or noticed until after the plaster in the ceiling below has been damaged. In evidence of this, there are now eighteen bathrooms with such damaged ceilings. We deem it advisable, therefore, to eliminate any further recurrence of similar leakage. To do this, we propose to chisel out all tile to a height of two and three-quarters inches measured from the top of the tub, insert a strip of 3.2 diamond mesh metal lath, apply a scratch and brown coat of Portland cement mortar even with the present tile, and then set a row of three-inch vitrious china tile evenly around the tub. Where colored feature strips have been used, tile of the same colore should be obtained. Having adopted this procedure in many cases during the past three years, we are reasonably certain of satisfactory results.

Upon a time and material basis, the cost of repairing and pointing all tile work, replacing all broken tile and door sills, resetting all loose base tile, and treating all necessary bathtubs in the aforementioned method will approximate $240.

Plumbing Repairs

There is, perhaps, not a single faucet, shutoff valve, nor Sloan valve that does not need some repair. At least twenty-two faucets should be replaced while the balance may be reseated and provided with new washers. All Sloan toilet valves should be provided with shutoffs so that diaphragms may be replaced without shutting down the entire water supply for the time of repair. Several toilet bowls need resetting, two of them are missing, and new toilet seats should be provided throughout. Several of the six-inch apron, cast-iron enameled, wall lavatories are slightly damaged by constantly dripping water. They can be touched up as the cost of replacement would be prohibitive. We expect to have this work done by our master plumber upon a time and material basis and estimate the cost at approximately $525.

Heating Plant Repairs

To solve the heating problem, we have solicited various suggestions. They are:

1. Weld the cracked sections, remove the stoker, and install patented natural force feed draft grates.
2. Replace the cracked sections, remove the stoker, and install the same grates.
3. Replace the present boiler with a new cast iron or steel boiler.

Before considering any one of these propositions we wish to call your attention to the following facts as we see them:

1. The present boiler has previously been welded.
2. The front section as well as intermediate sections No. 6, No. 7, and No. 8 are now leaking.
3. The water level of the boiler has been lowered approximately four inches below its normal level. This was done, perhaps, to enlarge the steam chamber, hoping thereby to obtain quicker results. This caused the water level to drop approximately three inches below the crown sheet, while it should have been at least one inch above so that all metal contacted by flame reacts evenly as to expansion and contraction. Since at times (especially while forcing the fire)

three inches of the crown section had no water, the extreme heat drew all sand particles out of the metal, thereby changing its density and consequently its rate of expansion and contraction.

Removal of stoker: Regardless of any decision reached pertaining to the heating plant, we recommend the removal of the stoker as we do not consider it a fuel saver nor a means to obtain proper heating. The stoker has a salvage value of $50.

Installation of grates: The removal of the stoker will necessitate the installation of grates. Ordinary grates are not recommended as they produce comparatively inefficient combustion and require the use of more expensive fuel; the firing would become more cumbersome, and, therefore, ordinary grates would actually constitute a step backward in comparison with the stoker. Several boilers in buildings under our supervision have been provided with patented grates which have proven to be a considerable advancement in heating. These grates are of a shaker type, air-cooled, with natural forced-feed draft. When properly installed with the fire wall under the curtain and at a forty-five degree angle, so as to regulate the flue travel, they produce nearly perfect combustion, permit the use of less expensive fuel, and are guaranteed to save approximately 25 per cent on actual fuel consumption. Even though the job will have to be hand fired, the time between refueling is estimated to be four to five hours, which is equal to or better than the requirements of a stoker. The cost of the grate installation will be $237.38.

Welding of boiler: One weld has been located in the rear section of the boiler below the normal water line. This would lead one to believe that an improperly functioning distribution and return system resulted in a dangerously low water level. It would also indicate that either the coal condensate returned or cold water was injected while the boiler was too hot. This same procedure is likely to have caused the cracks located in the crown sheet of intermediate sections Nos. 6, 7, and 8.

General opinion seems to be against welding. In some cases, however, we believe that a cast iron boiler can be welded satisfactorily provided the actual causes of cracking are also eliminated and guarded against. In this instance the boiler would have to be dismantled which would be costly and the result doubtful.

Distribution system: The original two-pipe vacuum job with Dunham valves and traps has, through neglect and faulty replacements, deteriorated to a gravity return system. The main feed line, after leaving the boiler, branches into two sections running toward the front of the basement. At this point, where the vertical risers start, two one-quarter-inch ports have been installed. These ports are offset by one ordinary Dunham No. 5 quick vent. This vent is not suitable for a vacuum job and would, under ordinary conditions, require days to eliminate the air feeding through both ports. In these main branches, two No. 221 A eliminators at $23.65 each should be installed to fill the first and foremost requirement, namely, the elimination of air from the lines. The wet return lines are of two-inch piping which is inadequate for proper return of the condensate. At the end of these returns, a condensation pump has been installed which serves the only function of pumping the water back into the boiler. However, as long as the water is held in the lines by back pressure, pockets, and ineffective quick vents, the pump is practically useless. Therefore, we should like to replace this condensation pump with a vacuum pump which would automatically maintain a certain vacuum in the lines.

We recommend that a 5,000-foot Chicago automatic vacuum pump be installed in place of the condensation pump and that the present worn-out McDonald automatic equalizer be replaced with one of the same type. This installation would, it is believed, make the entire system ap-

proximately 30 per cent more efficient. It would give quicker results, reduce the fuel consumption considerably, and eliminate most of the causes of cracking the boiler. Even a new boiler would perhaps crack during the first season unless the system were first put in proper condition. All radiators are equipped with Dunham steam valves and thermostat traps. Several of these were tested, and we believe that approximately 30 per cent of the steam valves and nearly all of the trap inserts will have to be replaced. It would be advisable to replace the inserts immediately at a cost of $1.50 for a one-half-inch size and $1.90 for a three-quarters-inch size, while the steam valves should wait until the beginning of the heating season. Only such steam valves need replacing as leak around the stem.

Summary of Cost:

1.A. Heating Plant		
Welding of boiler	$ 92.00	
Grates; ash pit frame and door; cementing of pit; building of fire wall, retaining wall, etc.—complete installation	237.38	
Covering of boiler with 1" magnesia block and canvas	60.00	
Labor and material for cleaning of boiler	25.00	
Total boiler		$ 414.38
Less salvage value of stoker		50.00
		$ 364.38
1.B. Distribution System		
Steam valves	$ 90.00	
135 thermostat traps	165.00	
1 McDonald water equalizer	45.00	
8 new traps in basement	24.00	
2 No. 221 A eliminators	47.30	
3" bleeder on boiler	45.00	
1—5000' Chicago automatic vacuum pump	350.00	
Labor—installation and cleaning system	55.00	
		$ 821.30
Total Heating Plant and Distribution System		$1,185.68

2. Replacing of cracked sections	$ 520.20	
Grates	210.00	
Distribution system	821.30	
		$1,551.50
Less salvage value of stoker		50.00
		$1,501.50
3. New U.S. W. N. 280 C.T. boiler—6,100 ft. direct load	$1,544.00	
Grates	210.00	
Distribution system	821.30	
		$2,575.30
Less salvage value of stoker		50.00
		$2,525.30

Hot Water System

The hot water system consists of a Capital Hot Water Heater and a 940-gallon asbestos covered storage tank.

The heater is somewhat undersize and has been estimated to produce less than a forty-degree temperature rise per hour. It is in a good condition with the exception of minor repairs. It seems advisable, therefore, to give it a thorough trial before considering a larger unit.

The storage tank seems to be in a fair condition. The circulating lines, in our opinion, were improperly installed. The building feed line draws directly from the heater, with the result that one tenant may get exceedingly hot water (coming directly from the heater) while another tenant may have to wait or be content with the cooler water from the storage tank. In changing the building feed line to leave the tank at the opposite end, several objectives could be achieved. They are: better circulation, greater storage capacity, and better preheating of the cold water entering the heater.

Estimate of cost:

Installing new circulating line	$ 9.00
Cutting hand hole in tank and cleaning system	12.00
Ash door for heater	4.50
New grates for heater	15.00
Relief valve	7.50
Covering heater and tank	11.00

Labor	21.50	
Total cost estimate		$80.50

This estimate is based upon having our master plumber do the work. We have received other estimates, the next lowest being $105. If a new hot water heater were to be installed, the cost would be, according to the lowest bid received, $406.54.

LATHING AND PLASTERING

The amount of plastering necessary can be accurately estimated only after all of the wall paper has been removed. In most apartments, especially in the front section of the upper floors, numerous cracks appear and are magnified by the pulling away of the wall paper and poorly finished patches.

Before defining the method to be employed in repairing or eliminating these cracks, one must first determine their origin. We have found the following major causes:

1. The use of improperly seasoned lumber and consequent excessive shrinkage.
2. Unequal distribution of horizontal timber.
3. Faulty beader and arch construction.
4. The building was not permitted to dry out properly before the plaster finish coat was applied.
5. The wood laths were apparently too dry when the brown coat was applied.

In apartment No. 210, which was damaged by fire, we found evidence of all of the above mentioned causes.

The most devastating of the causes is perhaps the unequal distribution of horizontal timber. This may be explained as follows: On either side of the hallway horizontal steel beams support the floor joists. The latter are of 2″x10″ yellow pine which rest upon a 2″x6″ sill, which in turn rests upon the steel beam. The 2″x4″ staggered stud partition wall, with a 2″x6″ sill at the bottom and a 2″x6″ plate at the top, then sets upon the joists and is anchored to the steel beam above. The result is sixteen inches of horizontal timber, while at the other end the joists rest upon the solid masonry wall. The additional shrinkage in the horizontal timber is sufficiently great to cause a crack along the underside of the steel beam, or approximately twelve to fourteen inches below the ceiling angle, running to both sides and the entire length of the halls. Similar cracks, of course, are visible on the apartment side of the hall partition walls.

It would be useless to resort to the common method of patching to overcome this condition, namely, to cut out the crack in an inverted V-groove fashion and to fill this groove with high-gauge putty coat material. Within less than six months the crack would again open up and likely on both sides of the fill-in. Thus, two cracks would show instead of one.

We intend to do the following: From large pieces of Rocklath (4′x8′), we shall cut strips eight feet long and of a width sufficiently wide to cover the lowest point of the horizontal crack after butting the strip against the ceiling and nailing it along the upper portion of the wall. All vertical joints will be stripped with diamond mesh metal lath, and care will be taken not to nail the Rocklath below the crack. If this is not done, the natural expansion and contraction of the steel in counter action with the loosened stud partition wall will result in a stress within the strip of Rocklath and cause the latter to move away from the ceiling, thus forming another crack. The Rocklaths will be covered with a fair coat of brown mortar, which, after being permitted to dry thoroughly, will receive a smooth putty coat finish. In this manner, false beams will be constructed along the halls. The external angle will be formed by stripping in tacking the cornice strips as closely to the beam line as possible, yet maintaining a straight and true line. The soffit will be square with the wall line, and with the aid of a miter rod (plasterer's tool) a slight but sharp groove will be cut in the angle between soffit and wall. Any movement that will occur may result in no

more than a slight opening of this last mentioned groove. A slight opening will not be noticeable to the average eye as it will be hidden by the shadow in this angle.

Other walls where diagonal cracks occur will be treated in substantially the same manner, that is, by nailing large sheets of Rocklaths securely to the studs and covering only the cracked wall portions. If, for instance, a crack starts at the right, upper angle of a wall and descends diagonally in a ragged line to a point, say, six feet to the left, a sheet six feet wide will be nailed to the wall butting against the ceiling and the wall to the right, reaching to the upper edge of the base mould. In this instance, care must be taken to cut a groove not only along the newly formed vertical, external angle but also along the margin of the base moulding. Upon a time and material basis, we have estimated the total cost of material and labor for this work to be $750.

Decorating

All bids for decorating have been rendered subject to the following specifications:

Seven two-room and thirty-eight three-room apartments:

Typical apartment:

Kitchen and dinette: Wash and enamel two coats light ivory throughout. (Burn off loose paint.)

Living room, bedroom, hall, dressing closet, and clothes closets: Remove all calcimine from ceiling. Paint one coat of sealer and one coat of flat paint. Wash walls with steel wool and patch all nail holes and cracks (large cracks will be taken care of by plasterer). Paint walls one coat of sealer and two coats of flat paint. Stipple last coat.

Bathroom: Remove and burn off all loose paint. Spot prime and enamel two coats light ivory throughout, including medicine cabinet.

Dark doors: Wash thoroughly and varnish one coat.

Trim: Wash and enamel one coat of ivory.

Floors: Sand, fill, and varnish two coats.

Radiators: Refinish with 50/50 aluminum and gold bronze.

Halls and stairways: Remove all canvas and panel strips from wainscoting. Save chair rail. Wash throughout. Paint ceiling and walls two coats of flat paint. Remove all glue and sizing from wainscoting (wash with steel wool). Paint one coat of sealer and one coat of R. & M. Spruce Enamel. Wash and varnish all trim and doors.

Wash both stairways from roof to basement, patch cracks, and enamel one coat (light and dark gray). Wash woodwork—bannisters, risers, treads, etc.—and paint two coats of dark gray enamel. Remove all rubber treads.

Lobby: Wash throughout and paint one coat of 50/50 flat and sealer. (Make allowance of $120 for second coat and glazing.)

Paint Materials:

All paint materials are to be of R. & M. brand; are to be delivered in sealed, original containers properly labeled; and are to be applied in strict accordance with manufacturer's instructions.

As previously mentioned, bids for exterior painting have been submitted by the same contractors. They are quoted as follows:

	Exterior	Halls	Apartments	Totals
A & B	$850.00	$ 800.00	$4,550.00	$6,200.00
C	947.00	954.00	4,850.00	6,751.00
D	957.00	1,224.00	5,120.00	7,301.00
E				6,235.00

A and B are the low bidders on all this work, and we feel that they are well equipped, capable, and worthy of being awarded the contract. Both A and B did work for our firm for several years before forming their present partnership and are thoroughly familiar with the type of workmanship we demand.

Floor Covering

Kitchen and dinette: The floor space in the kitchen and dinette of each apartment is to be covered with linoleum. We have specified standard gauge, inlaid, cemented over felt, which we believe is suitable for this job. The following quotations include the cost of material, laying, brass edging at all doors, and Michigan state sales tax:

A	$532.29
B	511.80
C	531.69
D	684.94

The estimates submitted by A and C are nearly the same; even though C enjoys

an excellent reputation, we know that A's service, quality of workmanship, and integrity are beyond reproach.

Entrance lobby and halls: The lobby floor is of Tennessee marble, while the halls have terrazzo floors with wood base. At one time in the past, carpet runners were installed, and, for the purpose of keeping the carpeting in place, holes had been drilled in the floor at twenty-four-inch intervals and wooden plugs inserted to receive nails or screws. This, of course, resulted in unsightly scars which are impossible to eliminate.

Our suggestions are contained in the following specifications:

Lobby: Two widths of carpet, each twenty-seven inches wide, from entrance to fire door, with inserts to elevators and stairway doors.

Halls: Balance of first floor, and all floors above, to have thirty-six-inch runner with insert to all doors.

Material: Use "Alexander Smith's" wool velvet, 4000 series. Pattern to be selected by this office.

Method of laying: Terrazzo and marble floors are now partly pegged for thirty-six-inch runners. Where pegs are rotted out or missing, replace same. To secure inserts, cement four-inch strips of battleship linoleum to floor parallel with threshold and use as tacking strip. Same method to be used on stair treads.

Lay all carpeting over thirty-two-ounce waffle pattern hair padding.

The bids received are:

A	$659.74
B	683.00
C	700.00

Stairs: All stair treads are now painted. It is our intention to enamel them again and replace the worn-out rubber treads. The bids received included a medium heavy black rubber tread 9"x24" with nosing, landing mats for all landings, and the cost of installation:

A	$69.06
B	80.65

Bids have also been obtained on a rubber mat to be used in the vestibule during the winter season. This would not only eliminate the dangers of slipping but would absorb considerable dirt which would otherwise be tracked into the lobby. A plain rubber runner for the protection of the lobby carpet would also be advisable. Specifications and bids covering such a mat and runner are as follows:

1 ¼" thick solid black rubber mat with white feature border corrugated and perforated
10 6" white block letters—"Wayne Court"
1 Corrugated rubber runner—6 yards

A	$33.80
B	44.80

The low bidder receives a considerable amount of business from this office and appears to operate on a little closer margin.

LOCKS AND DOOR CHECKS

It has been found that many apartment keys fit other doors while some locks cannot be opened with the master keys. Considering further that no record of outstanding keys exists, little safety can be offered the new guests unless all locks are changed. Other necessary work is included in this specification:

1. Taking off all apartment locks and the front door lock, repairing same, and buffing face plates.
2. Installing forty-five new cylinders, factory mastered.
3. Installing three new locks on front, side, and rear doors.
4. Furnishing three keys for each apartment door, 100 keys for front and rear doors, and eight service keys for rear door only.
5. Installing new spindles and knobs in forty-five apartment doors (hall side only).
6. Repairing and refilling of all door checks now in use and replacing the missing checks.
7. Installing two vestibule doors now stored in basement.
8. Refinishing, by buffing method, all brass kick plates, push bars, etc. of front doors.
9. Installing new lock and replacing missing brass trim on front entrance door.

Only one bid of $321.32 has been received. Two others have been requested.

MAILBOXES

In the past a mail distribution system

prevailed which has been outlawed, i.e., all incoming mail was delivered to the resident manager who in turn delivered it to the guests or held it in his apartment (office) until claimed.

Originally, two batteries of mailboxes were provided and located in the vestibule walls on either side of the entrance door. Name plates with call bell panels still occupy their original space, while the mailboxes have been replaced by mirrors. We propose to remove the mirrors, install new government approved mail boxes with name plates and call bell panels, check the call bell system, and make all necessary repairs. To accommodate the new mail boxes, the openings in the stone walls will have to be enlarged; the cost of this item has been provided for under "Miscellaneous." All other work mentioned above will cost $355.

Electrical Repairs

Change of current: The downtown district in which this property is located is, to a great extent, still being serviced with direct current. During the past five years the Detroit Edison Company has encouraged property owners to take advantage of their offer to change to alternating current. The main reasons are, perhaps, to replace the old and obsolete equipment and to give better service to the consumers. It is generally accepted that electrical appliances and motordriven equipment have a longer useful life when serviced with alternating current. This is especially noticeable with refrigerators and radios. Refrigerators for use with alternating current carry a five-year guarantee while practically no guarantee can be obtained on direct current units. Furthermore, since most people have radios, and since we hope to draw our new tenants from surrounding alternating current districts, the current supply change would lower the sales resistance and thereby open a wider field.

The following building equipment is affected by the current change:

1. Refrigerators. (The present system is obsolete and is scheduled for replacement.)
2. Stoker Motor. (This as well as the stoker should be discontinued in our opinion.)
3. Motor for Condensation Pump. (This pump is not suitable and should be replaced.)
4. Elevator Equipment. (This equipment need not be changed immediately. The cost involved would be approximately $1,500. An agreement will have to be signed in which the Detroit Edison Company stipulates that the change to alternating current be made within three years if so requested. However, we have reason to believe that several years will elapse before this request is forthcoming. Many property owners will have to change their equipment, and many commercial establishments will have to replace equipment worth thousands of dollars before the change is made complete; for instance, the refrigeration equipment of the Niome apartments is comparatively new and is expected to have a remaining useful life of more than five years. Hundreds of similar situations may be cited; therefore, we believe that as long as any direct current is being supplied within this neighborhood, the building will be allowed to operate its elevator on direct current.)

The cost to the building will be negligible, consisting of a charge of $16.50 payable to the Detroit Edison Company for the material (cables, etc.) used in bringing the service from the rear lot line to the inside basement wall. All equipment such as meters, etc. are, as usual, loaned by the supply company.

Change to individual meters: The building was originally provided with individual apartment meters for both light and gas. Several years ago this was changed to a one-meter system, whereby the building furnished both utilities to all tenants. If a reversal is contemplated, this is undoubtedly the time to make such a change, as considerable opposition might be met when the building is completely occupied. The cost of this change to individual electric meters would be around $55. There would be no charge for the installation of individual gas meters.

There is some doubt in our minds regarding the advisability of installing the individual meter system in this building. Most downtown buildings furnish both

utilities. It is probable that we may not be able to rent more than one-half of these apartments unfurnished. Furnished apartments would have to include this service while the unfurnished apartment tenants would have to apply directly to the utilities service companies. This is bothersome to most people and might cause a delay in tenanting the building to the high rate of occupancy.

It is admitted that there are advantages to the individual meter system. However, we feel that a proportionately higher rental including the cost of the services rendered, would, from the tenant's standpoint, be the lesser of two evils.

Elevator: In the event it is considered advisable to change the present equipment to operate on an alternating current supply of 220 volts, 3-phase, 60-cycle instead of the present direct current supply of 240 volts, it would be necessary to furnish and install a complete new controller brake and motor on the machine. All electric wiring would have to be renewed and consideration given to a new car operating box, hall buttons with "car in use" lights, floor stopping switches, new hoist cables, a new car light globe, new door locks, a new mechanical gate closer, and new car floor covering.

In addition to the above work, it would in any case be necessary to dismantle the machine; install new case bearings; adjust end-thrusts; take cut off worm; reassemble and realign the machine; clean the car and hatchway; refasten all door closers and hangers; and clean, check, and test the car safeties and governors. These necessary repairs, together with the change to alternating current, would cost $1,860. The cost of overhauling the elevator without changing the equipment so as to operate on alternating current would be $435.

Electric light fixtures: All living rooms have bracket light fixtures. They are obsolete because of style, and the cost of repair would exceed the price of new fixtures. The most conservative method of repairing the old fixtures would include replacing the present pull-chain type candlestick sockets with turn type sockets (this is less expensive than using new pull-chain sockets) and rewiring the fixtures. This would cost $1.44 per fixture. An additional $.50 each would be required to refinish the fixtures with two spray coats of some suitable material. New two-light, turn-switch type brackets can be purchased for $1.29 each, which is 50 per cent of the list price. These fixtures are conservatively modern, and such an improvement would increase the rentability of the apartments.

The bedrooms have ceiling fixtures of an obsolete single-light globe type which can be replaced with new, oval, two-light, open-rosette fixtures at a unit cost of $1.00 less 40 per cent, or a net expenditure of $.60 per bedroom.

The hall fixtures are also obsolete and absorb too much light by reason of semi-translucent globes. They can be replaced with single, open-rosette type fixtures costing $1.08 net each ($1.80 less 40 per cent). Approximately thirty-six fixtures are required for the halls and for the rear stairway (the front stairway now has the proposed type), which would bring the cost of fixtures for the public space to $38.88, plus $18.00 or $20.00 for an attractive lobby fixture. We have removed the wall brackets in the lobby since adequate artificial lighting can be achieved through one ceiling fixture, with a resultant saving in current consumption. All fixtures as outlined above are subject to an installation charge which varies considerably. We propose to have this work done upon a time and material basis, the installation charge to run about $.25 per fixture.

In addition to these replacements, considerable electrical repair work will be necessary, such as:

1. Check and repair all outlets.
2. Replace all turn-type switches with new toggle switches.

3. Install one additional convenience outlet in each living room.
4. Install one new outlet for refrigerator in each kitchen.
5. Test all wiring and fuse boxes.
6. Install several drop cords in locker rooms and other basement space.
7. Replace all switch plates with new bakelite plates.

The cost estimate of such work is as follows:

Underground cable	$ 16.50	
Light fixtures	325.00	
Materials, switches, plates, wire, cables, etc.	275.00	
Labor	650.00	
Inspection fee	6.00	
		$1,272.50

Window Shades and Curtain Rods

We propose to salvage all rollers and shade cloth that can be reused, transferring these to unimportant rooms. We find it would cost more to replace all missing, bent, and broken curtain rods to fit the present fixtures than it would cost to replace all such fixtures and rods with a newer type. A window shade company, which has done most of our work in the past, has submitted an estimate guaranteeing this cost not to exceed $375. This estimate specifies the use of Bontex shade materials and includes the cost of the labor to complete the job.

Refrigerators

We requested bids based upon a cash transaction on forty-five individual electric refrigerators, guaranteed for five years. Following are the bids received, together with the cubic contents and the outside dimensions of the refrigerator covered by each bid:

Make	Contents	Height	Width	Depth	Price
A	3.54 cu. ft.	48″	24″	23″	$4,032.45
B	3.10 cu. ft.	45″	23″	24″	3,476.25
C	3.20 cu. ft.	47″	24″	24¾″	3,708.00
D	2.80 cu. ft.	36″	24″	22″	4,148.33
Available space		48″	25½″	24″	

Any one of these units could be installed in the available space without disturbing the present cupboard arrangement.

Gas Stoves

All stoves in this building are at least ten years old and have outlived their usefulness. In most cases they are too large for the space available and therefore tend to make the room appear small. Many of the stoves could be placed in a satisfactory condition for the average cost of $12 per unit. However, replacement of all stoves is advised, especially since present prices are quite favorable, as indicated by the following quotations:

A Series 800—No. 854 with top and door insulated, white and black enamel, 4 burners, oven and broiler, with two lighters, installed $31.88
The disadvantages of this unit (as we see them) are: the door and top cover are hinged, which may develop into a considerable maintenance item.

B Series B-410 with top and door insulated, white and black enamel, 4 burners, oven and broiler, with top lighter, installed $28.00

C Kitchenette Model No. 4404, door and top insulated, 4 burners, oven and broiler, top lighter, installed (approximate cost) $35.00

Considering these three models from the standpoint of serviceability, appearance, and price, we believe that the stoves described in the second quotation would be the best suited to the kitchens in this building. The oven door on this type of stove swings downward, the only replaceable part being a spring, which any caretaker should be capable of replacing. The top has no hinges and recedes between the burners and backsplash.

The present equipment has a salvage value of $2.00 per stove. The total cost for the forty-five units would be:

$28 × 45	$1,260.00
Sales Tax 3%	37.80
	$1,297.80
Less salvage $2 × 45	90.00
Net Cost	$1,207.80

The construction of the new stoves is superior to that of the stoves being replaced. However, assuming that the useful life of the new equipment is equal only to

that of the old, or ten years, the yearly depreciation reserve would be approximately $120. On the other hand, if the present stoves were reconditioned, their remaining useful life would be no more than three years. The total reconditioning cost at $12 per stove would amount to $540, and, based upon an estimated useful life of three years, the annual reserve for replacement would be $180.

MISCELLANEOUS

There are, of course, many smaller items which have not been considered under the above headings, such as: window washing and cleaning, cleaning materials and tools, light bulbs, shower curtains, laundry dryers, and advertising. The last three mentioned items may or may not have to be considered. Tenants may prefer to buy their own shower curtains; laundry dryers may not have to be furnished, depending entirely upon the amount of laundry work done in the building; and advertising and its cost will depend upon the rental market at the time of completion of repairs. We suggest that $500 be set aside for miscellaneous items.

RENTAL SCHEDULE

As an aid in deciding the different factors to which varying degrees of importance may be attached, we have set up a flexible rental schedule. It contains four different columns and represents our estimates of:

Schedule No. 1—The rental income of unfurnished apartments with heat, light, and gas furnished.

Schedule No. 2—The rental income of unfurnished apartments with light and gas furnished by the tenant.

Schedule No. 3—The amount to be added to either Schedule No. 1 or No. 2 in the event the apartment is furnished.

Schedule No. 4—The amount to be added to either Schedule No. 1 or No. 2 if the apartment is completely furnished, including linen, dishes, pots, pans, etc.

Apt. No.	Location	Number of Rooms	Schedule No. 1	Schedule No. 2	Schedule No. 3	Schedule No. 4
B	S. Rear	3	Janitor	——	——	——
105	S. Court	3	Manager	——	——	——
106	N. Court	3	$ 45.00	$ 40.00	$ 9.00	$ 15.00
107	S. Court	3	45.00	40.00	9.00	15.00
108	N. Court	3	45.00	40.00	9.00	15.00
109	S. Court	3	42.50	37.50	9.00	15.00
110	N. Court	3	42.50	37.50	9.00	15.00
111	S. Rear	2	42.50	37.50	6.00	11.00
112	N. Rear	3	47.50	42.50	9.00	15.00
201	S. Front	3	52.50	47.50	9.00	15.00
202	N. Front	3	52.50	47.50	9.00	15.00
203	S. Court	2	42.50	37.50	6.00	11.00
204	N. Court	3	47.50	42.50	9.00	15.00
205	S. Court	3	47.50	42.50	9.00	15.00
206	N. Court	3	47.50	42.50	9.00	15.00
207	S. Court	3	47.50	42.50	9.00	15.00
208	N. Court	3	47.50	42.50	9.00	15.00
209	S. Court	3	45.00	40.00	9.00	15.00
210	N. Court	3	45.00	40.00	9.00	15.00
211	S. Rear	2	45.00	40.00	6.00	11.00
212	N. Rear	3	50.00	45.00	9.00	15.00

Apt. No.	Location	Number of Rooms	Schedule No. 1	Schedule No. 2	Schedule No. 3	Schedule No. 4
301	S. Front	3	52.50	47.50	9.00	15.00
302	N. Front	3	52.50	47.50	9.00	15.00
303	S. Court	2	45.00	40.00	6.00	11.00
304	N. Court	3	47.50	42.50	9.00	15.00
305	S. Court	3	47.50	42.50	9.00	15.00
306	N. Court	3	47.50	42.50	9.00	15.00
307	S. Court	3	47.50	42.50	9.00	15.00
308	N. Court	3	47.50	42.50	9.00	15.00
309	S. Court	3	47.50	42.50	9.00	15.00
310	N. Court	3	47.50	42.50	9.00	15.00
311	S. Rear	2	47.50	42.50	6.00	11.00
312	N. Rear	3	50.00	45.00	9.00	15.00
401	S. Front	3	52.50	47.50	9.00	15.00
402	N. Front	3	52.50	47.50	9.00	15.00
403	S. Court	2	47.50	42.50	6.00	11.00
404	N. Court	3	50.00	45.00	9.00	15.00
405	S. Court	3	50.00	45.00	9.00	15.00
406	N. Court	3	50.00	45.00	9.00	15.00
407	S. Court	3	50.00	45.00	9.00	15.00
408	N. Court	3	50.00	45.00	9.00	15.00
409	S. Court	3	50.00	45.00	9.00	15.00
410	N. Court	3	50.00	45.00	9.00	15.00
411	S. Rear	2	50.00	45.00	6.00	11.00
412	N. Rear	3	52.50	47.50	9.00	15.00
			$2,065.00	$1,850.00	$366.00	$617.00

Stores:	Present Rental	Anticipated Rental After Rehabilitation
Bar	$75.00	$ 90.00
Barber Shop	35.00	40.00
Vacant Store	——	45.00
		$175.00

Rental Income of Unfurnished Apartments and Stores

(Schedule No. 1)

Unfurnished Apartments	$ 2,065.00
Stores	175.00
Total Monthly Rental	$ 2,240.00
Yearly rental expectancy 100% occupied	$ 26,880.00
Less 10% for vacancies	2,688.00
	$ 24,192.00

Cost Estimate of Utilities Service

(Schedule No. 2)

Gas consumption at 100 per cent occupancy	$ 65.00
Electric current at 100 per cent occupancy	195.00
Total Monthly Utility Service	$260.00
Rentable Units	43
Service Units	2
Halls, Elevators, Etc., estimated units	7
Total Units	52
Proportionate share per unit (260 ÷ 52)	$ 5.00

Furniture Requirements

Typical Two-Room Apartment:

1 Two-piece living room set	$67.50
1 Occasional chair	9.75
1 Desk	10.50
1 Gate-legged table	9.75
2 Side chairs @ $4.50	9.00
1 End table	2.95
1 Smoker	.85
2 Pictures @ 85c	1.70
1 Mirror	3.95

1 Inner-spring mattress (for murphy bed)	10.50	
1 Pair of pillows	2.95	
1 Bridge lamp and shade	3.55	
1 Junior lamp and shade	3.55	
1 9'x12' rug and pad	35.00	
2 runners @ $4.00	8.00	
1 Kitchen table and 2 chairs	13.00	
2 Pairs of living room curtains	2.50	
1 Pair of kitchen curtains	1.00	
1 Pair of bathroom curtains	.80	
		$196.80
Tax 3%		5.90
		$202.70

Kitchen:

1 Carpet sweeper	$ 4.50	
1 Set of cooking utensils, broom, dustpan, dishpan, rugs, etc.	13.95	
1 Set of silverware (solid nickel)	2.75	
1 Set of glassware (6 glasses)	.70	
1 Set of china (48 pieces)	5.65	
1 Ironingboard	3.00	
		$ 30.55
Tax 3%		.91
		$ 31.46

Bedroom:

1 Double bed with rubber casters	$16.00	
1 Dresser	21.00	
1 Chest of drawers	17.00	
1 Night table	7.00	
1 Chair	4.50	
1 Picture	1.00	
1 Coil spring	8.00	
1 Inner-spring mattress	10.50	
2 Small rugs	8.00	
2 Pairs of curtains	2.50	
		$ 95.50
Tax 3%		2.87
		$ 98.37

Linen:

Three-Room Apartment:

8 Sheets 81"x99"	$ 8.00	
8 Pillow cases 45"x36"	2.00	
2 Bed pads	2.50	
4 Blankets	12.50	
4 Bedspreads	6.00	
3 Luncheon cloths and 6 napkins	2.00	
6 Dish towels	.65	
8 Bath towels	2.25	
8 Hand towels	1.65	
3 Scarfs	1.20	
		$ 38.75
Tax 3%		1.17
		$ 39.92

Two-Room Apartment:

4 Sheets 81"x99"	$ 4.00	
4 Pillow cases 45"x36"	1.00	
1 Bed pad	1.25	
2 Blankets	6.25	
2 Bedspreads	3.00	
3 Luncheon cloths and 6 napkins	2.00	
6 Dish towels	.65	
8 Bath towels	2.25	
8 Hand towels	1.65	
3 Scarfs	1.20	
		$ 23.25
Tax 3%		.70
		$ 23.95

RENTAL INCREASE IF FURNISHED (SCHEDULE NO. 3)

Three-Room Unit:

Furniture $202.70+$98.37	$301.07
5% Interest	15.00
	$316.07
Life of Furniture 3 Years—Monthly Charge	$ 9.00

Two-Room Unit:

Furniture	$202.70
5% Interest	10.00
	$212.70
Life of Furniture 3 Years—Monthly Charge	$ 6.00

RENTAL INCREASE FOR FURNITURE AND FURNISHINGS (SCHEDULE NO. 4)

Three-Room Unit:

Furniture + 5% — 3 Years	$316.07	$ 9.00
Kitchen furnishings ($31.46) + 5% — 1 Year	33.03	2.75
Linens, etc. ($39.92) + 5% — 1 Year	41.91	3.50
Monthly Charge		$15.25
Use		$15.00

Two-Room Unit:

Furniture + 5% — 3 Years	$212.70	$ 6.00
Kitchen furnishings—($31.46) + 5% — 1 Year	33.03	2.75
Linen, etc. ($23.95) + 5% − 1 Year	25.15	2.10
Monthly Charge		$10.85
Use		$11.00

Summary of Cost Estimates

Cleaning the facade	$ 150.00
Tuck pointing and masonry	100.00
Roofing	442.00
Glass and screens	210.00
Exterminating	115.00
Wall paper removing	260.00
Carpentry	975.00
In-a-door bed repairs	135.00
Tile repairs	240.00
Plumbing repairs	525.00
Heating system	2,525.30
Hot water system	80.50
Lathing and plastering	750.00
Painting and decorating	6,200.00
Linoleum	532.29
Carpeting	659.74
Stair treads	102.86
Locks and door checks	321.32
Mailboxes	355.00
Elevator repairs	435.00
Electrical repairs	1,272.50
Window shades and curtain rods	375.00
Refrigerators	3,476.25
Gas stoves	1,207.80
Miscellaneous	500.00
	$21,945.56

Conclusion

The above estimates are based upon present day prices and are subject to change. However, as a whole, we believe we have been conservative; even though slight variations may result, the sum total is deemed sufficient to rehabilitate the building as outlined. However, we feel that an expenditure too much in excess of our estimate may produce an unbalanced project, bringing into effect the law of diminishing returns.

* * *

What to Study

C. M. JONES, EDITOR

Librarian, The Institute of Real Estate Management

Book Reviews

Weimer, Arthur M. and Rowland, John J. WHEN YOU BUY OR BUILD A HOME. *New York, Ronald Press, 1937. 149 pp. $2.00.*

HERE is another book of interest to the real estate man who finds that the managing of small homes is a large part of his business. Although aimed primarily at the man who will own his home, there is much of value for the man who builds small homes for rent.

Chapter one considers the selection of the site. Chapters two, three, and four deal with architectural features, the general plan of the property, and structural factors. Chapter five is on the real estate market and cycle. Chapter six explains the mechanics of purchasing, and chapters seven and eight cover the financing of the project and the functions of the architect.

Mr. Weimer is Professor of Real Estate and Housing at Indiana University. Mr. Rowland is Associate Professor of Architecture, Georgia School of Technology.

Chapter two, which considers types of architecture, will prove valuable to Realtors confused by such terms as the English type, the Colonial style, etc. "Architectural styles may be divided into three classes," according to these authors: "(1) Traditional types which were developed in this country or other countries such as the English, French, Spanish, and American colonial, with its various modifications, (2) Personal types which were developed in this country by some architects and which have been copied by others, (3) the Modern—sometimes called the International style, developed recently from new types of construction and new building materials." Useful characterizations are also included which help the novice in correctly identifying the type. For example, the English style is described thus:

"They are characterized by irregular masses, steep roofs of slate or flat tile, walls of stone or brick and of half timber construction—that is, a heavy timber framework filled in with plaster or brick. Windows are generally small, but bay windows are often built for additional light and as a decorative motif."

Plenty of illustrations are used, and the format of the book is attractive. Realtors will find it most readable.

Torok, Elmer. AIR CONDITIONING IN THE HOME. *New York, The Industrial Press, 1937. 296 pp. $3.00.*

PROPERTY managers with small homes in their accounts will find this book of great interest, since air conditioning is not a dream of the future but is a reality. The air conditioning of our stores and office buildings has been advancing rapidly. Apartment buildings are adding this feature. New homes are now being offered with either partial or complete air conditioning. Business men are demanding as much comfort in their homes as in their offices. The man who rents small homes has already discovered that he must know something about air conditioning.

Here is a concise, readable, and comprehensive handbook written in nontechnical language. The table of contents shows the scope of the volume: What Air Conditioning Does for the Home; The Functions of an Air Conditioning System; Equipment; Installation and Operation; Principles of Air Conditioning; Psychrometric Tables for Calculations; Heating and Cooling Calculations; Design of Air Distribution System; Table of Conversion Factors; Etc.

The author is a member of the American Society of Heating and Ventilating Engineers.

Valuable features of the book are simple designs which show the arrangement of different systems and illustrate just how air conditioning apparatus may be combined with existing heating arrangements. The advantages and disadvantages of different systems are pointed out. The important question of cost is carefully considered, and typical figures are given. Tables showing relative and absolute humidities are also included.

Many people consider air conditioning as a luxury, as were the radio and the automobile in the early days. In a like manner, air conditioning has been prohibitive because of its high cost of installation and operation. But this new development has been subjected to the same intensive research as were these earlier useful inventions. New systems have been developed, and costs have been reduced materially. The time is fast coming when air conditioning will be assured even for those of moderate means. Property managers must be prepared for this potential demand.

New Articles

Real Estate Record

"Inadequate Maintenance Cuts Lighting Efficiency," by Samuel G. Hibben.

Dirty fixtures, discolored walls and ceilings, aged bulbs, and an improper combination of lamps and reflectors result in costly illumination wastes in office buildings. *Metropolitan Edition. October 2, 1937, p. 13.*

* * *

"Recent Developments in the Chain Store Field," by James J. McCormack.

A resume of developments in the New York City area shows an increase in activity of chain stores. *October 9, 1937, p. 4.*

* * *

"The Scope of Real Property Management," by Lee Thompson Smith.

The president of a large management concern gives the different phases of real estate that affect the property manager. *October 16, 1937, p. 4.*

* * *

"Covenants of the Lease," by J. Edward Newberger.

Mr. Newberger is an attorney and instructor of field men for the University of Chicago. In this article he sets forth the obligations of certain covenants of the lease on landlord and tenant and the rights that accrue to each party on a breach of those agreements. *September 18, 1937, p. 10.*

* * *

"Realtors—Advertise Your Offices," by Joseph B. Ford.

This ardent advocate of higher license standards for the real estate profession makes a plea for advertising procedure that will contribute to the influence of the home office. *October 23, 1937, p. 7.*

* * *

Skyscraper Management

"Cleaning Equipment and Supplies," by Walter Pfaendler.

"Cleaning is the most ancient of all vocations." Proper tools and materials and up-to-date methods are requisites for satisfactory work. *September, 1937, p. 6.*

* * *

"Standardization—for Good and Bad Times Alike," by Frank M. Whiston.

The need for effective standardization of rental practices is emphasized—confidence in each other being a very important element. *October, 1937, p. 3.*

* * *

"Real Estate Service of Tomorrow," by Murray E. Randell.

Successful real estate offices of tomorrow are predicted to be made up of specialists in each department. *October, 1937, p. 8.*

* * *

Buildings and Building Management

"Your Profits Depend on the Tenants You Keep," by Clement E. Merowit.

Little things a landlord can do to keep the goodwill of his tenants. *September, 1937, p. 52.*

* * *

"Diversification of Work Keeps Janitors Alert," by J. Edward Tufft.

An experienced superintendent of a large building gives some good reasons why he gets better results from diversification of cleaning work rather than specialization. *October, 1937, p. 35.*

* * *

"Liquor and the Landlord," by Lawrence R. Bloomenthal.

Present laws governing the manufacture and sale of alcoholic beverages impose both civil and criminal responsibility upon landlords. *October, 1937, p. 46.*

* * *

National Real Estate Journal

"What's New in Heating."

This article gives a brief review of heating installation costs and of the most recent developments in equipment and accessories. *September, 1937, p. 46.*

* * *

"Management and Sales Departments Cooperate to Increase Business," by David B. Simpson.

How a successful office works out this cooperation plan. *September, 1937, p. 54.*

* * *

American Building Association News

"Bringing the Outdoors Inside," by Earl Aiken.

Delightful possibilities for glass block masonry. Illustrations and descriptions given. *September, 1937, p. 476.*

* * *

"Management and Handling of Real Estate Owned," by Thomas E. Pemberton.

"Since real estate has been acquired by the lending institution in order to protect its investment, and not to make a profit, management should bend every effort to liquidate its real estate account in an orderly manner as soon as industrial conditions warrant its sale." *October, 1937, p. 550.*

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Appraisal Standards	*E. L. Ostendorf, M.A.I.*
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Our Real Estate Tax Problem	*Ivan A. Thorson, M.A.I.*

JULY, 1937

Rate of Capitalization	*Thurston H. Ross, M.A.I.*
The Gyroscope of Rural Appraisals	*True D. Morse, A.F.M., A.R.A.*
The Appraisal of Cemeteries II	*Martin W. Lederer*
Appraisal Procedure of Federal Agencies	*Percy E. Wagner, M.A.I.*
Writing Reports	*George L. Schmutz, M.A.I.*
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Accounting for Buildings in Farm Property Valuation	*W. E. Hobbs*
Some Problems Confronting Appraisers in Condemnation Cases	*Burton Thompson, M.A.I.*
The Appraiser and Public Relations	*Mark Cheesman, M.A.I.*

APRIL, 1937

The Appraisal of Cemeteries I	*Martin W. Lederer*
Appraising the Small Home	*David Neiswanger, M.A.I.*
Court Testimony	*George L. Schmutz, M.A.I.*
Depreciation in Industrial Properties	*R. M. Fischer*
Techniques in Value Estimation	*Ayers J. du Bois, M.A.I.*
Relation of Owner-Occupied Residential Property Value to Family Income	*S. L. Kedzierski*
Amortization or Depreciation Reserves	*Cuthbert E. Reeves, M.A.I.*
Can Real Estate Have More than One Value?	*Dominick Dunn, M.A.I.*

JANUARY, 1937

The Data Program for the Appraisal of Dairy Farms	*True D. Morse, A.F.M., A.R.A.*
The Valuation of "Guaranteed" Mortgages	*S. Edwin Kazdin, M.A.I.*
The Changing Scene and Appraisal Progress	*Maurice F. Reidy, M.A.I.*
Planning the Appraisal	*K. Lee Hyder, M.A.I.*
Appraising Typical Business Properties for Loan Purposes	*Fred L. Chapman, M.A.I.*
A New Approach to the Solution of the Appraisal Problem	*Frederick M. Babcock, M.A.I.*
The Appraiser's Responsibility Under H.O.L.C. Property Appraisal Report Form	*Leonard Downie, M.A.I.*

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